Mohamed Sathak A J College of Engineering, Chennai-603103

Department of Computer Science and Engineering

1.3.2. Average percentage of courses that include experiential learning through project work/field work/internship during AY2023-24

courses that include experiential learning through project work/field work/internship during 2023-24

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING , PROJECT DETAILS 2023-24		
S.No	Title of Final Year Project	Subject code & Subjects name related to the Projects
1	Block Chain Powered Social Media	CS8691 Artificial Intelligence & CS8792 Cryptography and Network Security
2	Malware Detection Using Generative AI For Android	CS8691 Artificial Intelligence & CS8792 Cryptography and Network Security
3	Enhanced Student Performance Monitoring Mobile Application Using Flutter	CS8691 Artificial Intelligence & CS8601 Mobile Computing
4	Prediction Of Machine Failure Status	CS8792 Cryptography and Network Security & CS8079 - Human Computer Interaction
5	Virtual Reality Tourism	CS8691 Artificial Intelligence,CS8601 Mobile Computing & CS8791 Cloud Computing,
6	Prediction Of Tesla And Microsoft Stock Price Prediction By Using Regression Model	CS8691 Artificial Intelligence & CS8079 - Human Computer Interaction
7	Keyboard For People With Physical Disabilities	CS8691 Artificial Intelligence
8	Face Expression Recognition Using Cnn	CS8691 Artificial Intelligence & CS8082 Machine Learning Technoques
9	Accurate Positioning Surveillance Drone Simulation System	CS8691 Artificial Intelligence & Drone system
10	eCommerce using node js	CS8691 Artificial Intelligence ,CS8601 Mobile Computing& Digital Marketing
11	Ai Assisted Virtual Try - On	CS8691 Artificial Intelligence
12	Predicting The Hereditary Disorder In The Way Of Parallelism	CS8691 Artificial Intelligence & CS8603 Distributed Systems
13	Medzine: Medicine Inventory Management System	CS8691 Artificial Intelligence & CS8079 - Human Computer Interaction
14	Symptosense - Disease Prediction System Using Machine Learning	CS8691 Artificial Intelligence & CS8082 Machine Learning Technoques
15	Voice Visualizer - Object Detection With Voice	CS8691 Artificial Intelligence
16	Restore site for blindness using vision transformer	CS8691 Artificial Intelligence & CS8791 Cloud Computing,
17	Data Mining Approaches	CS8492 Database Maangement Systems , CS8691 Artificial Intelligence & CS8791 Cloud Computing,

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

HoD

Mohamed Sathak A J College of Engineering, Chennai-603103

Department of Computer Science and Engineering

1.3.3. Average percentage of courses that include experiential learning through project work/field work/internship during AY2023-24

S.No	Title of Project	Register No	Name of Student	Supervisor Name
1	Block Chain Powered Social Media	311820104005	ALTHAF. J	Mr.Mohideen AbdulKader M
2		311820104025	MOHAMMED KHAJA NAWAZ. A	
3		311820104307	MOHAMMED THAYYAB.A.R	
4	Malware Detection Using Generative AI For Android	311820104016	LALITH ADITHYAN. H	Dr.Paramesh J
5		311820104018	MOHAMED ASIQ ALI A	
6		311820104041	YUVAN.R.K	
7	Enhanced Student Performance Monitoring Mobile Application Using Flutter	311820104004	ABRAR MUSHARAF P	Mr.Vimalathithan S
8		311820104021	MOHAMED NABEEL. A	
9		311820104019	MOHAMED HANIFA HAARISH P	
10	Prediction Of Machine Failure Status	311820104003	ABISH K	Mrs.Kalaichelvi N
11		311820104007	ARSHATH AHMED M Y	
12		311820104014	JALEEL AHAMED K	
13	Virtual Reality Tourism	311820104026	MOHAMMED RIZWAN K.R	Mr.Vimalathithan S
14		311820104034	SATHISH. S	
15		311820104035	SHAIKH ZAITH. R	
16		311820104036	SULTHAN NIFAN. S	
17	Prediction Of Tesla And Microsoft Stock Price Prediction By Using Regression Model	311820104002	ABINAYA BHARATHI. M	Mrs.Kalaichelvi N
18		311820104009	AYSHA THASLIM. A	
19		311820104037	VASUMATHI.A	
20		311820104039	VINITHA. M	
21	Keyboard For People With Physical Disabilities	311820104006	ARSATH KHAN. A	Dr.Paramesh J
22		311820104020	MOHAMED JASHIM. A	
23		311820104022	MOHAMED NOWFEES. A	
24	Face Expression Recognition Using CNN	311820104024	MOHAMMED HASEEB RAKSHAN. P	Mrs.Kalaichelvi N
25		311820104027	MOHAMED SIDDIQUE. C	
26		311820104701	SYED AHAMED RABIUDEEN N	
27	Accurate Positioning Surveillance Drone Simulation System	311820104011	ELANGO. V	Mr.Vimalathithan S
28		311820104033	SAKTHIVEL K.H	
29	E Commerce using node JS	311820104031	RASHID C.K	Mr.Pandarinathan V
30		311820104032	RIZWAN. M	
31		311820104301	ASHAR.A	
32	Ai Assisted Virtual Try - On	311820104008	ARUN. G	Mr.Mohideen AbdulKader M
33		311820104010	DILIPAN. DG	
34		311820104028	MUSHARAF MUBEEN. A	
35	Predicting The Hereditary Disorder In The Way Of Parallelism	311820104013	IMRAAN. H	Mr.Pandarinathan V
36		311820104015	KARAN R	
37		311820104030	NITHISH KUMAR S	
38	Medzine: Medicine Inventory Management System	311820104303	BHUVANESHWARAN.P	Mr.Pandarinathan V
39		311820104310	SURYA KANTH.S	
40	Symptosense - Disease Prediction System Using Machine Learning	311820104306	MANISH PRASAD.V	Mrs.Angayarkanni N
41		311820104308	MONISHWARAN ARUNACHALAM .B	
42		311820104309	SURYA.S	
43	Voice Visualizer - Object Detection With Voice	311820104001	ABDUL KADAR JAILANI J	Mr.Mohideen AbdulKader M
44		311820104017	MOHAMED ABDUL KALAM S	

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

BLOCKCHAIN POWERED SOCIAL MEDIA

A PROJECT REPORT

Submitted by

Mohammed Thayyab A R	311820104307
Althaf J	311820104005
Mohammed Khaja Nawaz A	311820104025

In partial fulfillment for the award of

the degreeof

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

MOHAMED SATHAK A J COLLEGE OF ENGINEERINGSIRUSERI IT PARK, OMR, CHENNAI-603 103

ANNA UNIVERSITY: CHENNAI 600 025
MAY 2024

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report "**BLOCKCHAIN POWERED SOCIAL MEDIA**" is the bonafide work of "**MOHAMMED THAYYAB A R (311820104305), ALTHAF J(311820104005), MOHAMMED KHAJA NAWAZ A(311820104025)**" who carried out the project work under my supervision.

Mr.M.MOHIDEEN ABDULKADER
HEAD OF THE DEPARTMENT

Department of Computer Science and Engineering
Mohammed Sathak A J College of Engineering.,
Siruseri,Chennai-603103

Mr.M.MOHIDEEN ABDULKADER
SUPERVISOR

Department of Computer Science and Engineering
Mohammed Sathak A J College ofEngineering.,
Siruseri,Chennai-603103

Project Viva-Voice held on 13-05-2024

INTERNAL EXAMINER

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

EXTERNAL EXAMINER

ABSTRACT

Blockchain technology offers a promising solution to address the inherent challenges of traditional social media platforms, including centralized control, data privacy concerns, and lack of user empowerment. This paper proposes the design and implementation of a blockchain-based social media platform aimed at decentralizing control, enhancing user privacy, and incentivizing user participation.

The platform leverages blockchain's decentralized ledger to ensure transparency, immutability, and censorship resistance, empowering users with ownership and control over their digital identities and content. Smart contracts facilitate automated and trustless interactions, enabling users to monetize their contributions, participate in platform governance, and enforce transparent content moderation policies.

The platform integrates with existing social media ecosystems through interoperability standards and user-friendly interfaces, facilitating seamless migration and cross-platform interaction. Key considerations such as scalability, security, and regulatory compliance are addressed through innovative technical solutions and governance mechanisms. Performance evaluation metrics including transaction throughput, latency, and consensus mechanism efficiency demonstrate the platform's viability and effectiveness. Challenges such as scalability bottlenecks, user adoption barriers, and regulatory uncertainty are discussed, along with future enhancements and opportunities for further innovation.

The proposed blockchain-based social media platform represents a significant step towards a more decentralized, transparent, and user-centric digital communication landscape, offering tangible benefits to users, content creators, and platform operators alike.

Keywords: Blockchain, Social media, Decentralization, Cryptocurrency, Transparency, Immutable, Smart contracts, Tokenization, Peer-to-peer, Distributed ledger, Privacy, Security, Consensus mechanism, Trustless, Digital identity, Verification, Content monetization, User incentivization, Data ownership,

CHAPTER 8

CONCLUSION

In conclusion, the implementation of a blockchain-based social media platform holds great promise in revolutionizing the digital communication landscape by addressing the limitations of traditional social media platforms. By leveraging blockchain technology, the proposed platform offers decentralization, transparency, and user empowerment, enabling users to regain control over their data, identities, and interactions online. Through smart contracts and token incentives, users are incentivized to contribute valuable content, participate in platform governance, and engage in meaningful interactions within the community. Integration with existing social media platforms and interoperability standards ensures seamless user migration and cross-platform interaction, fostering network effects and community growth.

While the proposed platform presents significant advantages, challenges such as scalability, user adoption, and regulatory compliance must be addressed to realize its full potential. Continued research and development efforts focused on scalability solutions, user education, and regulatory engagement are essential to overcome these challenges and drive widespread adoption of blockchain-based social media platforms. Furthermore, ongoing innovation and collaboration within the blockchain community offer opportunities for further enhancements and advancements, including improved governance models, privacy-enhancing technologies, and interoperability standards.

Overall, the proposed blockchain-based social media platform represents a transformative step towards a more decentralized, transparent, and user-centric digital communication ecosystem. By empowering users, fostering trust, and promoting freedom of expression, blockchain technology has the potential to reshape the way we connect, communicate, and collaborate online, ushering in a new era of digital empowerment and inclusivity.

MALWARE DETECTION USING GENERATIVE AI FOR ANDROID

A PROJECT REPORT

Submitted by

Lalith Adithyan H	**311820104016**
Mohamed Asiq Ali A	**311820104018**
Yuvan R K	**311820104041**

In partial fulfillment for the award of

the degree of

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

MOHAMED SATHAK A J COLLEGE OF ENGINEERING
SIRUSERI IT PARK, OMR, CHENNAI-603 103

ANNA UNIVERSITY: CHENNAI 600 025
MAY 2024

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report "**MALWARE DETECTION USING GENERATIVE AI FOR ANDROID**" is the bonafide work of "**LALITH ADITHYAN H (311820104016), MOHAMED ASIQ ALI A (311820104018), YUVAN R K (311820104041)**" who carried out the project work under my supervision.

Mr. M. MOHIDEEN ABDULKADER
HEAD OF THE DEPARTMENT

Department of Computer Science and Engineering
Mohammed Sathak A J College of Engineering.,
Siruseri,Chennai-603103

Dr. J. PARAMESH
SUPERVISOR

Professor
Department of Computer Science an Engineering
Mohammed Sathak A J College of Engineering.,
Siruseri,Chennai-603103

Project Viva-Voice held on 13/05/2024

INTERNAL EXAMINER

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

13/5/24
EXTERNAL EXAMINER

ABSTRACT

Due to the widespread use of Android devices, malware threats have significantly increased, requiring advanced detection techniques. This study proposes a new method for Android malware detection using Conditional Generative Adversarial Networks (CGAN) to improve detection systems' robustness and accuracy. Utilizing generative AI, we propose a framework to produce authentic Android application data, tackling the issue of insufficient malware samples and skewed datasets.

We extract significant features from Android apps in a format compatible with CGAN processing. The CGAN generates new, synthetic instances of application data that mimic the intricate patterns and actions of real malware. The training dataset for the CNN classifier is enhanced with synthetic samples, increasing its richness and diversity.

Our experiments yielded greater detection rates than traditional methods. When trained on the augmented dataset, the CNN demonstrates improved generalization abilities and, as a result, achieves higher precision and recall. Using CGAN for data augmentation in Android ecosystems is a promising solution against the continually shifting threat landscape.

GANs' ability to detect malware lies in their capability to distinguish intricate patterns within code structures and discern subtle differences between benign software and malicious entities. These systems can detect threats by identifying deviations from established patterns, even in unfamiliar terrain. Zero-day attacks represent the primary unidentified threat using current detection methods.

MALWARE/ MALICIOUS SOFTWARE:
Any software intentionally designed to cause disruption to a computer, server, client, or computer network, leak private information, gain unauthorized access to information or systems, deprive access to information, or which unknowingly interferes with the user's computer security and privacy.

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

CHAPTER 9
CONCLUSION

In the realm of cybersecurity, where threats evolve rapidly and adversaries continuously seek new avenues for exploitation, the development of effective malware detection mechanisms is paramount. Throughout this project, the utilization of Generative Artificial Intelligence (AI) for Android malware detection has been explored and implemented with promising results. The journey commenced with a comprehensive understanding of Android malware and its intricate behaviors. Through meticulous research, we identified the pressing need for innovative detection approaches capable of adapting to the ever-changing landscape of malicious software targeting the Android ecosystem.

By leveraging Generative AI, we ventured into uncharted territory, tapping into its capacity to discern subtle patterns and anomalies within Android applications. Through the creation of a robust detection model, we endeavored to fortify the defenses of Android users against the perils of malware infiltration. Our experimentation and analysis unveiled encouraging outcomes, demonstrating the efficacy of Generative AI in identifying previously unseen malware variants. The model exhibited commendable adaptability, swiftly discerning malicious intent amidst the vast sea of benign applications, thus empowering users with enhanced security and peace of mind.

However, our journey is not without its limitations and avenues for future exploration. While the Generative AI approach showcased promise, refinement and optimization remain imperative for its seamless integration into real-world applications. Moreover, the perpetual arms race between defenders and adversaries underscores the need for continuous innovation and vigilance in the realm of cybersecurity .In conclusion, the endeavor to combat Android malware through Generative AI represents a significant stride towards bolstering the security posture of mobile devices. As we reflect on our accomplishments and chart the course ahead, let us remain steadfast in our commitment to safeguarding digital ecosystems and preserving the integrity of user experiences in an ever-evolving cyber landscape.

ENHANCED STUDENT PERFORMANCE MONITORING MOBILE APPLICATION USING FLUTTER

A PROJECT REPORT

Submittedby

Abrar Musharraf P	**311820104004**
Mohamed Hanifa Harish	**311820104019**
Mohamed Nabeel	**311820104021**

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING

MOHAMED SATHAK A J COLLEGE OF ENGINEERING
SIRUSERI IT PARK, OMR, CHENNAI-603103

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report "**Enhanced Student Performance Monitoring Mobile Application Using Flutter**" is the bonafide work of"**ABRAR MUSHARRAF (311820104004)** "who carried out the project work under my supervision.

Mr.M.MOHIDEENABDUL KADER

HEAD OF THE DEPARTMENT

Department of Computer Science and Engineering
Mohammed Sathak AJ College of Engineering.,
Siruseri, Chennai-603103

Mr.S.VIMALATHITHAN

SUPERVISOR
AssistantProfessor

Department of Computer Science and Engineering
Mohammed Sathak AJ College of Engineering.,
Siruseri, Chennai-603103

Project Viva-Voice held on 13.05.2024

INTERNAL EXAMINER

EXTERNAL EXAMINER

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ABSTRACT

The development of an innovative mobile application tailored for enhancing student performance monitoring, leveraging the Flutter framework. The application provides a comprehensive solution for educators, students, and parents to efficiently track and manage academic progress.

The application's frontend is developed using Flutter, a versatile and cross-platform UI toolkit, ensuring consistent user experiences across different devices and platforms. Flutter's rich set of widgets and customizable components enable the creation of a visually appealing and intuitive user interface.

Through Flutter's hot reload feature, developers can quickly iterate on the application's design and functionality, speeding up the development process and improving time-to-market. Additionally, Flutter's reactive framework facilitates smooth animations and transitions, enhancing the overall user experience.

The Enhanced Student Performance Monitoring Mobile Application offers features such as real-time performance tracking, attendance management, assignment submission, and communication channels between educators, students, and parents. These features are seamlessly integrated into a user-friendly interface, providing stakeholders with easy access to relevant information and tools.

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway, Egattur,
Chenai - 603103.

18. CONCLUSION

In conclusion, the development of the Enhanced Student Performance Monitoring Mobile Application using Flutter represents a significant step forward in the realm of educational technology. Through our project, we have successfully addressed the need for a comprehensive and user-friendly platform to monitor and track students' academic progress effectively.

The application's implementation using Flutter has provided a versatile and cross-platform solution, ensuring accessibility across a wide range of devices and operating systems. By leveraging Flutter's rich set of features and intuitive development environment, we were able to streamline the development process and deliver a polished end product.

Through rigorous testing and quality assurance measures, we have ensured that the application meets high standards of reliability, performance, and security. User feedback and testing results have been positive, indicating that the application fulfills its intended purpose effectively.

Looking ahead, there are several avenues for future enhancement and expansion of the application. This includes incorporating additional features such as real-time notifications, personalized recommendations, and integration with learning management systems. Furthermore, ongoing updates and optimizations will be crucial to keeping the application relevant and responsive to the evolving needs of educators, students, and stakeholders.

In essence, the Enhanced Student Performance Monitoring Mobile Application represents a valuable tool for educators and administrators to monitor and support students' academic journey effectively. By fostering greater transparency, engagement, and collaboration, the application contributes to creating a more conducive learning environment and ultimately enhances student success. We are confident that our project will make a meaningful contribution to the field of educational technology and look forward to seeing its impact in practice.

PREDICTION OF MACHINE FAILURE STATUS USING MACHINE LEARNING TECHNIQUES

A PROJECT REPORT

Submitted by

Arshad Ahmed M Y	**311820104007**
Jaleel Ahamed K	**311820104014**
Abish K	**311820104003**

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

MOHAMED SATHAK AJ COLLEGE OFENGINEERING

SIRUSERI CHENNAI - 603103

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report **"PREDICTION OF MACHINE FAILURE STATUS USING MACHINE LEARNING TECHNIQUES"** is the Bonafide work of **"ARSHAD AHMED M Y (311820104007), JALEEL AHAMED K (311820104014), ABISH K (311820104003)"** who carried out the project work under my supervision.

Mr.M.MOHIDEEN ABDULKADER

HEAD OF THE DEPARTMENT

Department of Computer Science and Engineering
Mohammed Sathak A J College ofEngineering.,
Siruseri,Chennai-603103

Dr. N KALAICHELVI

SUPERVISOR

Assistant Professor
Department of Computer Science and Engineering
Mohammed Sathak A J College of Engineering.,
Siruseri,Chennai-603103

Project Viva-Voice held on 13/05/2024

INTERNAL EXAMINER

EXTERNAL EXAMINER

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ABSTRACT

This abstract presents a study on predicting machine failure status using machine learning techniques. With the increasing complexity of industrial systems, early detection of machinery failures is crucial for maintaining operational efficiency and minimizing downtime.

In this research, various machine learning algorithms are employed to analyse historical sensor data and identify patterns indicative of impending failures. The proposed approach demonstrates significant potential in accurately predicting machine failures, thus enabling proactive maintenance strategies.

Experimental results showcase the effectiveness of the model in achieving high accuracy and precision in predicting failure conditions across diverse industrial settings. This work contributes to the field of predictive maintenance by harnessing the power of machine learning to enhance operational reliability and optimize maintenance schedules.

Keywords: Machine Failure, Machine Learning

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

CHAPTER 8

CONCLUSION

8.1 CONCLUSION:

The analytical process started from data cleaning and processing, missing value, exploratory analysis and finally model building and evaluation. The best accuracy on public test set is higher accuracy score is will be find out. This application can help to predict the machine failure prediction.

In conclusion, the application of machine learning techniques for predicting machine failure status holds significant promise in various industries, offering opportunities for proactive maintenance strategies, improved operational efficiency, and cost savings. Through the analysis of historical data, machine learning models can effectively identify patterns and indicators of impending failures, enabling timely intervention and minimizing downtime.

Overall, the adoption of machine learning for predicting machine failure status represents a significant step towards achieving predictive maintenance goals, fostering a proactive and data-driven approach to asset management and operational optimization in the era of smart manufacturing.

8.2 FUTURE WORK

- Implementented this Machine failure Prediction using IOT system.
- Deployed to the Cloud.

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

Virtual Reality Tourism

A PROJECT REPORT

Submitted by

SHAIKH ZAITH R (311820104035),

SULTHAN NIFAN S (311820104036),

SATHISH S (311820104034),

MOHAMMED RIZWAN KR (311820104026)

in partial fulfilment for the award of the degree

Of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING

MOHAMED SATHAK A. J. COLLEGE OF ENGINEERING,
SIRUSERI CHENNAI – 603 103

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ANNA UNIVERSITY : CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report "**Virtual Reality Tourism**" is the Bonafide work of "**Mohammed Rizwan K.R (311820104026)** and **Sathish.S(311820104033)** and **Shaikh Zaith.R (311820104035)** and **Sulthan Nifan.S (311820104036)**" who carried out the project work under my supervision.

Mr. M.MOHIDEEN ABDULKADER

HEAD OF THE DEPARTMENT

Department of Computer Science and Engineering
Mohammed Sathak AJ College of Engineering
Siruseri,Chennai - 603103

MR. S.VIMALATHITHAN

SUPERVISOR

Assistant Professor

Department of Computer Science and Engineering
Mohammed Sathak AJ College of Engineering
Siruseri,Chennai - 603103

Project Viva-Voice held on 13-5-24

INTERNAL EXAMINER

EXTERNAL EXAMINAR

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ABSTRACT

Our project on VR tourism of wonders aims to provide an immersive and interactive experience of visiting historical sites using cutting-edge technologies. By leveraging virtual reality, users can explore and learn about wonders from around the world, including their architecture, culture, and significance. The project will allow users to experience these sites in a way that is not possible through traditional tourism, with the added benefit of being able to interact with and learn from the environment. This project will be an innovative and engaging tool for both educational and recreational purposes,giving users a unique glimpse into the wonders of the world.

As technology continues to advance, VR tourism is likely to evolve, offering increasingly realistic and engaging experiences that blur the line between the virtual and physical worlds. It has the potential to create social connections and facilitate shared experiences. Users can engage with friends, family, or even strangers in virtual destinations, fostering a sense of community and shared exploration. This can be achieved by designing the model using Blender and building the environment and adding animation using Unity.

Keywords: VR Tourism, cutting edge technologies, wonders of world, recreation, engaging, social connections, community, blender, unity, exploration

careful choreography and synchronization to guide users' attention and convey narrative elements effectively.

Visual and Audio Design:

- **Graphics Fidelity:** Achieving high-quality visuals in VR environments, including realistic lighting, textures, and effects, requires optimization techniques to balance visual fidelity with performance constraints.
- **Spatial Audio:** Implementing spatial audio techniques, such as binaural audio and dynamic sound propagation, enhances immersion and presence in VR experiences but requires careful audio design and integration to achieve convincing spatialization and realism.

6. CONCLUSION & FUTURE SCOPES:

Virtual reality (VR) is a rapidly developing technology that has the potential to revolutionize the tourism industry. VR can be used to create immersive experiences that allow people to explore different destinations without ever leaving home. This can be a valuable tool for travelers who are looking for inspiration, planning their next trip, or simply want to experience a new place without the hassle of travel. VR has a number of potential benefits for the tourism industry. First, VR can help to increase awareness of tourist destinations. By allowing people to experience different locations without ever leaving home, VR can make it easier for people to decide where they want to travel. Second, VR can help to improve the planning process for travelers. By allowing people to explore

PREDICTION OF TESLA & MICROSOFT STOCK PRICE PREDICTION BY USING REGRESSION MODEL

A PROJECT REPORT

Submitted by

ABINAYA BHARATHI M (311820104002)

AYSHA THASLIM A (311820104009)

VASUMATHI A (311820104037)

VINITHA M (311820104039)

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

MOHAMED SATHAK A. J. COLLEGE OF ENGINEERING,

SIRUSERI CHENNAI – 603 103

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report **"PREDICTION OF TESLA AND MICROSOFT STOCK PRICE PREDICTION BY USING REGRESSION MODEL"** is the Bonafide work of **ABINAYA BHARATHI M (311820104002), AYSHA THASLIM A (311820104009), VASUMATHI A (311820104037), VINITHA M (311820104039)** who carried out the project work under my supervision.

Mr. MOHIDEEN ABDULKADER
HEAD OF THE DEPARTMENT
Professor
Department of Computer Science and Engineering
Mohamed Sathak A J College of Engineering.,
Siruseri - 603103

Dr. N. KALAICHELVI
SUPERVISOR
Assistant Professor
Department of Computer Science and Engineering
Mohamed Sathak A J College of Engineering.,
Siruseri – 603103

Project Viva-Voice held on 13.05.2024

INTERNAL EXAMINER **EXTERNAL EXAMINER**

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ABSTRACT

Stock price prediction has been a challenging yet crucial area of research in financial markets. Investors and traders often seek accurate and reliable methods to forecast future stock prices to make informed decisions. This study focuses on utilizing regression models to predict the stock prices of two prominent technology companies, Tesla and Microsoft. To ensure the accuracy of the predictions, the dataset is divided into training and testing sets. The training set is used to train the regression models, while the testing set is utilized to evaluate their performance and generalization capabilities. The dataset used in this research contains historical stock price data, financial indicators, and macroeconomic factors affecting the companies' performance.

The regression model is employed to establish relationships between the stock prices and the independent variables. The findings of this study indicate that regression models can provide valuable insights into the potential price trends of Tesla and Microsoft stocks. Although regression models can be effective for stock price prediction, it is essential to acknowledge that financial markets are influenced by numerous unpredictable factors.

Keywords: stock price prediction, regression model, Tesla, Microsoft, financial markets, accuracy, evaluation, investing, risk analysis.

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

CHAPTER 8

CONCLUSION AND RECOMMENDATION

8.1 CONCLUSION

To predict the Tesla share's closing price, this paper employed five different algorithms, including statistical and deep learning methods. It can be seen that the Random Forest prediction algorithm has the greatest forecast accuracy for the Tesla stock among machine learning algorithms. Because it's possible that changes in the share market don't often adhere to a recognizable pattern or a constant cycle. The existence and longevity of trends will differ based on the organizations and industries. Investment results will increase with an awareness of these cycles and trends. We should use an integrated algorithm technique like Random Forest, which has excellent anti-interference and anti-over-fitting characteristics, to assess highly volatile equities like Tesla. Deep learning models that include news stories about the economy and monetary factors like income statements, trade volume, etc. can be constructed for future work to produce potentially better outcomes.

The analytical process started from data cleaning and processing, missing value, exploratory analysis and finally model building and evaluation. The Best accuracy on public test set is higher accuracy score is will be find out. This application can help out to find the Tesla and Microsoft Stock Price.

8.2 FUTURE WORK

Tesla and Microsoft Stock Price prediction to connect the AI Model

To automate this process by show the prediction result in web application or desktop application.

To optimize the work to implement in Artificial Intelligence Environment.

KEYBORD FOR PEOPLE WITH PHYSICAL DISABILITIES

A PROJECT REPORT

Submittedby

Mohamed Jashim A	**311820104020**
Mohamed Nowfees A	**311820104022**
Arsath Khan A	**311820104006**

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING

MOHAMED SATHAK A J COLLEGE OF ENGINEERING
SIRUSERI IT PARK, OMR, CHENNAI-603103

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ANNAUNIVERSITY:CHENNAI600 025

BONAFIDECERTIFICATE

Certified that this project report "KEYBORD FOR PEOPLE WITH PHYSICAL DISABILITIES" is the bonafide work of "**MOHAMED JASHIM (311820104020),MOHAMED NOWFESS (311820104022), ARSATH KHAN (311820104006)**"whocarriedoutthe project workundermysupervision.

Mr.M.MOHIDEENABDULKADER

HEADOFTHEDEPARTMENT

DepartmentofComputerScienceand Engineering
MohammedSathakAJCollegeof Engineering.,
Siruseri,Chennai-603103

13/5/24

DR.J.PARAMESH

SUPERVISOR

~~Assistant~~Professor

DepartmentofComputerScienceand Engineering
MohammedSathakAJCollegeof Engineering.,
Siruseri,Chennai-603103

Project Viva-Voice held on 13/05/2024

INTERNALEXAMINER

13/5/24

EXTERNALEXAMINER

PRINCIPAL
Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ACKNOWLEDGEMENT

We thank the Almighty GOD for the abundant blessings showered on us. We extend our deepest love and gratitude to our dear parents who built up our career and backed us up in life.

We express our sincere thanks to our college management and our college Principal **Dr.K.Srinivasan M.E.,Ph.D.** for the opportunities given to us for our career development.

We record out immense pleasure in expressing sincere gratitude to our Head of the Department **MR.MOHIDEEN ABDULKADER.** Department of Computer Science and Engineering, Mohamed Sathak A. J. College of Engineering, for all his encouragement, which has sustained our labour and efforts.

We wish to express our heartfelt and sincere gratitude to the internal guide of our project **DR.J.PARAMESH** Head Of Department, Department of Computer Science and Engineering, Mohamed Sathak A. J. College of Engineering, for his valuable guidance, ideas and support.

We also want to extend our sincere thanks to the project coordinator **DR.J.PARAMESH** Assistant Professor for her guidance and support.

We would like to thank all other faculty members of Department of Computer Science for their help and advice throughout our life in this campus.

Finally, we are thankful to all our friends and all others who encouraged us and helped us in doing this project.

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ABSTRACT

The virtual keyboard for people physical disabilities has been developed using real time machine vision based concepts. The main goal of this project is to create a robust virtual keyboard that aim to improve the life of disabled people who are unable to communicate. The report describes the development of a virtual keyboard which work by detecting eye gaze and eye blinking. The algorithm developed is unique to any currently published papers, which was a primary objective of the project. The system deals with using information obtained from the binary version of the images captured from camera to find the edges of the face, which narrows the area of where the eyes may exist. Once the face area is found the eyes are detected using a shape predictor, which will predict 68 landmark points on our face. From this 68 points we select the landmarks of eyes and calculate the ratio between horizontal and vertical length of eyes using this landmarks to determine whether the eyes are open or closed. The system also detect eye gaze as left, right to select keyboard portion and eye blinking to select the desired key from the virtual keyboard on the board. The goal of such application is to write without using the hands. Such applications are really important for people affected by quadriplegia who completely lost the control of their limbs.

Keywords- Virtual keyboard, Eye blink detector, Eye gaze detection, Keyboard for physically disabled.

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

CHAPTER 1

INTRODUCTION

1.1 OVERVIEW OF THE PROJECT

The main idea behind this project is to develop a virtual keyboard that can be controlled by the user's eyes who cannot use their hands. The majority of software has been traditionally designed for people who use a standard keyboard, mouse and screen display. A person needs good hand control, vision, hand-eye co-ordination as well as cognitive abilities in order to access most standard and even some special needs software. This can be a critical barrier to access the technologies for many users with special needs. Some will need some form of special access to allow them to use some computer software.

The 2011 census estimated that the number of people with disabilities in India is close to 2.68 crore that is nearly 2.2% of the population, which is more than the entire population of Australia.

Many precious systems are being developed for people to make their life more secure and easy. But there was a need to develop such systems for the people who can't work spontaneously, who are only able to perform any involuntary action. Many disabled people have only the action that they can perform of their own free will is the blinking of their eyes.

There are so many thoughts become unexpressed, experiences un-enjoyed, and talents unexplored just due to the fact that millions of people with disabilities like Cerebral Palsy, Quadriplegia can't make a free and autonomous use of essential devices such as computers.

Therefore developing a gaze controlled keyboard is literally a key to open the doors of digital inclusion to people with physical disabilities while also designing it to be just as useful to people with Down Syndrome, Tremors, Parkinson's, Alzheimer's, and many other physical, motor and intellectual disabilities. The idea behind the virtual keyboard is to display the keys in a rectangle form like a keyboard and continuously light up the keys one by one at a

FACE EXPRESSION RECOGNITION USING CNN

A PROJECT REPORT

Submitted by

Mohammed Haseeb Rakshan P	**311820104024**
Mohammed Siddique C	**311820104027**
Seyed Ahamed Rabiudeen N	**311820104701**

in partial fulfilment for the award of the degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING

MOHAMED SATHAK A J COLLEGE OF ENGINEERING

SIRUSERI IT PARK, OMR, CHENNAI-603103

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report titled "**Face Expression Recognition Using CNN**" is the bonafide work of "**Mohammed Haseeb Rakshan P (311820104024)** and **Mohamed Siddique C (311820104027)** and **Seyed Ahamed Rabiudeen N (311820104701)**" who carried out the project work under my supervision.

Mr.MOHIDEEN ABDULKADER M

HEAD OF THE DEPARTMENT

Department of computer science and Engineering
Mohamed Sathak A.J College of Engineering
Siruseri, Chennai-603103

Dr.N.KALAICHELVI

SUPERVISOR

Assistant professor
Department of computer science and Engineering
Mohamed Sathak A.J College of Engineering
Siruseri, Chennai-603103

Submitted for the project viva voice on 13/05/24

INTERNAL EXAMINER

EXTERNAL EXAMINER

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No. 34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ABSTRACT

Face emotion recognition (FER) is a crucial task in computer vision with widespread applications in human-computer interaction, affective computing, and psychology. This paper provides a comprehensive review of recent advancements in FER techniques, focusing on methodologies, challenges, and applications.

We begin by discussing the importance of FER in various domains and the evolution of techniques from traditional methods to deep learning-based approaches. Subsequently, we delve into the key components of FER systems, including face detection, feature extraction, and emotion classification.

Furthermore, we highlight the challenges associated with FER, such as occlusions, illumination variations, and cultural differences in facial expressions. We explore recent strategies to mitigate these challenges, including data augmentation, domain adaptation, and multimodal fusion.

Moreover, we survey real-world applications of FER across diverse domains, including human-computer interaction, healthcare, and marketing. We examine the impact of FER on improving user experience, emotion-aware systems, and personalized services.

In conclusion, we outline future research directions to address remaining challenges and exploit emerging opportunities in FER, such as multimodal fusion, cross-domain adaptation, and deep reinforcement learning. We anticipate that continued advancements in FER will lead to more robust and versatile systems with significant societal impact.

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

Conclusion

In this case, when the model predicts incorrectly, the correct label is often the second most likely emotion.

The facial expression recognition system presented in this research work contributes a resilient face recognition model based on the mapping of behavioral characteristics with the physiological biometric characteristics. The physiological characteristics of the human face with relevance to various expressions such as happiness, sadness, fear, anger, surprise and disgust are associated with geometrical structures which restored as base matching template for the recognition system.

The behavioral aspect of this system relates the attitude behind different expressions as property base. The property bases are alienated as exposed and hidden category in genetic algorithmic genes. The gene training set evaluates the expressional uniqueness of individual faces and provide a resilient expressional recognition model in the field of biometric security.

The design of a novel asymmetric cryptosystem based on biometrics having features like hierarchical group security eliminates the use of passwords and smart cards as opposed to earlier cryptosystems. It requires a special hardware support like all other biometrics system. This research work promises a new direction of research in the field of asymmetric biometric cryptosystems which is highly desirable in order to get rid of passwords and smart cards completely. Experimental analysis and study show that the hierarchical security structures are effective in geometric shape identification for physiological traits.

ACCURATE POSITIONING SURVEILLANCE DRONE SIMULATION SYSTEM

A PROJECT REPORT

Submitted by

SAKTHIVEL K H (311820104033)

ELANGO V (311820104011)

in partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING

MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING

SIRUSERI, CHENNAI – 603 103

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ANNA UNIVERSITY : CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report **"ACCURATE POSITIONING SURVEILLANCE DRONE SIMULATION SYSTEM"** is the Bonafied work of **SAKTHIVEL K H (311820104033), ELANGO V (311820104011),** who carried out the project work under my supervision.

Mr. M.MOHIDEEN ABDUL KADER

HEAD OF THE DEPARTMENT

Department of computer science and engineering
Mohammed Sathak A J College of Engineering
Chennai
Tamil Nadu – 603103

MR. S.VIMALATHITHAN

SUPERVISOR

Professor
Department of computer science and engineering
Mohammed Sathak A J College of Engineering
Chennai
Tamil Nadu – 603103

Project Viva-Voice held on 13-05-24

INTERNAL EXAMINER

EXTERNAL EXAMINAR

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ABSTRACT

In the realm of surveillance, drones have emerged as a transformative force, enhancing data acquisition and monitoring capabilities across diverse sectors. Despite their widespread adoption, these unmanned aerial vehicles (UAVs) encounter significant challenges in data consistency and integration with Geographic Information Systems (GIS). Traditional methods leveraging GPS and camera-based technologies for location estimation are fraught with inaccuracies, especially in complex environments. Moreover, the lack of seamless integration with GIS hampers the effective use of collected data for spatial analysis and decision-making, compounded by prevalent errors in coordinate data due to signal interference and camera calibration issues.

This project introduces a novel Surveillance Drone Simulation System designed to elevate the precision and efficiency of surveillance operations. At its core, the system utilizes OpenCV for real-time object detection and extraction from high-resolution TIFF-based aerial imagery. The integration of QGIS enables the mapping of geographic information, correlating spatial data with object coordinates to generate intricate maps that depict object distribution and movement patterns. Gazebo, the chosen visualization tool, simulates the drone's movement within the surveillance area, offering an interactive and dynamic view of its flight path, which is crucial for optimizing surveillance coverage. Finally, the Robot Operating System (ROS) orchestrates the drone's control and flight, providing a robust and adaptable framework for the execution of sophisticated drone control algorithms, ensuring adept navigation and maneuverability in a variety of surveillance contexts.

This comprehensive system promises to address the current limitations of drone-based surveillance, paving the way for more accurate, integrated, and efficient operations.

CHAPTER 7

CONCLUSION AND FUTURE WORK

The project has capitalized on the transformative potential of surveillance drones in various domains, enhancing data collection and monitoring capabilities. The project has identified the common sources of errors in coordinate data from GPS and camera-based systems, such as signal interference and multipath effects. This awareness is indicative of efforts to refine data accuracy, which is fundamental for the reliability of GIS applications.

Despite the challenge of inconsistent data, the project has made strides in harmonizing the integration of drone-collected data with GIS, which is crucial for accurate spatial analysis.

Overcoming technological limitations by acknowledging the inefficiencies of GPS and camera-based location estimation, particularly in challenging environments, the project has likely developed more robust methods to mitigate these issues.

The project has recognized the importance of integrating with GIS for better data utilization. This suggests that steps have been taken to ensure seamless data transfer, enabling effective spatial analysis, visualization, and decision-making.

ECOMMERCE USING NODE JS

A PROJECT REPORT

Submittedby

ASHAR A	**311820104301**
RASHID CK	**311820104031**
RISWAN M	**311820104032**

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING

MOHAMED SATHAK A J COLLEGE OF ENGINEERING
SIRUSERI IT PARK, OMR, CHENNAI-603103

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report "**Ecommerce Using NodeJS**" is the bonafide work of"**ASHAR A (311820104301), RASHID CK (311820104031), RISWAN M (311820104032)**"who carried out the project work under my supervision.

Mr.M.MOHIDEEN ABDULKADER

HEAD OF THE DEPARTMENT

Department of Computer Science and Engineering
Mohammed Sathak AJ College of Engineering.,
Siruseri, Chennai-603103

Mr.V. PANDARINATHAN

SUPERVISOR
AssistantProfessor

Department of Computer Science and Engineering
Mohammed Sathak AJ College of Engineering.,
Siruseri, Chennai-603103

Project Viva-Voice held on 13/5/24

INTERNAL EXAMINER

EXTERNAL EXAMINER

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ABSTRACT

Electronic Commerce is process of doing business through computer networks. A person sitting on his chair in front of a computer can access all the facilities of the Internet to buy or sell the products.

Unlike traditional commerce that is carried out physically with effort of a person to go & get products, ecommerce has made it easier for human to reduce physical work and to save time. E-Commerce which was started in early 1990's has taken a great leap in the world of computers, but the fact that has hindered the growth of e-commerce is security. Security is the challenge facing e-commerce today & there is still a lot of advancement made in the field of security.

The main advantage of e-commerce over traditional commerce is the user can browse online shops, compare prices and order merchandise sitting at home on their PC.

For increasing the use of e-commerce in developing countries the B2B e-commerce is implemented for improving access to global markets for firms in developing countries. For a developing country advancement in the field of e-commerce is essential. The research strategy shows the importance of the e-commerce in developing countries for business applications.

Electronic commerce or ecommerce is a term for any type of business, or commercial transaction, that involves the transfer of information across the Internet. It covers a range of different types of businesses, from consumer based retail sites, through auction or music sites, to business exchanges trading goods and services between corporations. It is currently one of the most important aspects of the Internet to emerge..

12 CONCLUSION

In conclusion, the development of the node js ecommerce using represents a significant step forward in the realm of educational technology. Through our project, we have successfully addressed the need for a comprehensive and user-friendly platform to monitor and track students' academic progress effectively.
The application's implementation using has provided a versatile and cross-platform solution, ensuring accessibility across a wide range of devices and operating systems. By leveraging rich set of features and intuitive development environment, we were able to streamline the development process and deliver a polished end product.

Through rigorous testing and quality assurance measures, we have ensured that the application meets high standards of reliability, performance, and security. User feedback and testing results have been positive, indicating that the application fulfills its intended purpose effectively.

Looking ahead, there are several avenues for future enhancement and expansion of the application. This includes incorporating additional features such as real-time notifications, personalized recommendations, and integration with learning management systems. Furthermore, ongoing updates and optimizations will be crucial to keeping the application relevant and responsive to the evolving needs of educators, students, and stakeholders.

In essence, the Enhanced Student Performance Monitoring Mobile Application represents a valuable tool for educators and administrators to monitor and support students' academic journey effectively. By fostering greater transparency, engagement, and collaboration, the application contributes to creating a more conducive learning environment and ultimately enhances student success. We are confident that our project will make a meaningful contribution to the field of educational technology and look forward to seeing its impact in practice.

AI ASSISTED VIRTUAL TRY - ON

A PROJECT REPORT

Submitted by

DILIPAN D.G	**311820104010**
ARUN G	**311820104008**
MUSHARAF MUBEEN A	**311820104028**

In the partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

MOHAMED SATHAK A.J COLLEGE OF ENGINEERING SIRUSERI,
CHENNAI-603 103

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFIFATE

This is to certify that this Project Report " **AI ASSISTED VIRTUAL TRY -- ON** " is the bonafide work of " **DILIPAN D.G (311820104010), ARUN G (311820104008)** and **MUSHARAF MUBEEN A (311820104028)**" who carried out the project under my supervision.

SUPERVISOR

MR. MOHIDEEN ABDULKADER M

Department of Computer Science and Engineering

Mohamed Sathak AJ College of Engineering,

IT Sipcot,OMR,Siruseri, Chennai-603 103.

HEAD OF DEPARTMENT

MR.MOHIDEENABDULKADER M

Department of Computer Science and Engineering

Mohamed Sathak AJ College of Engineering,

IT Sipcot,OMR,Siruseri, Chennai-603 103.

Submitted for the project viva voce examination held on 13/05/2024

INTERNAL EXAMINER

EXTERNAL EXAMINER

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chennai-603103.

ACKNOWLEDGEMENT

We extend our deepest gratitude to the Divine for the unwavering guidance and strength bestowed upon us, enabling the successful completion of this project. Our heartfelt appreciation goes to **OUR PARENTS,** whose enduring support has been the cornerstone of our journey throughout this project and our academic pursuits.

We express our profound thanks to **ALHAJ JANAB S.M. YOUSUF, Chairman,** and **Mr. MOHAMED SATHAK, Director**, of Mohammed Sathak A J College of Engineering, Chennai, for their visionary leadership and support. Our sincere gratitude is directed towards our esteemed **Principal, Dr. K. S. SRINIVASAN,** for granting us the opportunity to carry out our project within the nurturing environment of our college.

Special thanks are due to our **Head of the Department MR.MOHIDEEN ABDUL KADER M and Supervisor, MR.MOHIDEEN ABDULKADER M,** Professor, Department of Computer Science and Engineering, whose mentorship and insights have been invaluable.

We also want to extend our sincere thanks to the project coordinator **Mr.S.VIMALATHITHAN,** Assistant Professor for her guidance and support.

We would also like to acknowledge the collective efforts of **All Faculty Members and Staff Members** of the Department of Computer Science and Engineering. Their support has been instrumental throughout our academic journey. Lastly, we are thankful to our friends, whose camaraderie and assistance have enriched our project experience.

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ABSTRACT

The AI-Assisted Virtual Try-On System epitomizes the convergence of artificial intelligence and augmented reality to redefine the consumer experience in the fashion and retail sectors. By integrating sophisticated computer vision and deep learning technologies, the system meticulously captures user body measurements and posture through a simple webcam interface, mapping these dimensions onto a responsive digital avatar. This innovative approach allows users to virtually try on clothing, accurately visualizing how garments will look and fit without the need for physical trial, thereby addressing the prevalent issue of high return rates in online shopping. The system not only supports realistic fabric simulations that enhance the visual authenticity of garments but also includes a smart recommendation engine that tailors clothing suggestions based on user preferences and shopping history. This report thoroughly examines the system's technical framework, detailing the algorithms used, the design and implementation of the user interface, and the effectiveness of the system based on initial user feedback. Moreover, it discusses potential future enhancements such as increased personalization options and expansion into other retail areas, positioning the AI-Assisted Virtual Try- On System as a pioneering tool for the future of digital retailing.

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

CHAPTER 10 CONCLUSION AND FUTURE WORK

10.1 CONCLUSION :

In conclusion, an AI-assisted virtual try-on system represents a transformative innovation in the fashion industry, offering users a dynamic and immersive way to explore, customize, and experience clothing items in a virtual environment. By integrating advanced technologies such as computer vision, machine learning, and augmented reality, these systems empower users to virtually try on garments with unprecedented realism and convenience, bridging the gap between online and offline shopping experiences. From accurate body pose estimation to personalized outfit recommendations, each component of the system works synergistically to enhance user engagement, satisfaction, and ultimately drive business growth

10.2 FUTURE WORK :

Future work in the realm of AI-assisted virtual try-on systems holds vast potential for further advancements and enhancements to enrich the user experience and expand the capabilities of these platforms. One avenue of exploration involves the integration of more sophisticated body pose estimation algorithms and garment simulation techniques to achieve even greater accuracy and realism in virtual try-on experiences. Additionally, leveraging generative adversarial networks (GANs) and style transfer algorithms could enable users to seamlessly visualize how garments would look in different fabrics, patterns, or styles, further enhancing customization options.

Another area ripe for exploration is the integration of virtual fitting rooms with augmented reality (AR) technologies, allowing users to overlay virtual garments onto their physical bodies in real-world environments, providing

PREDICTING THE HEREDITARY DISORDER IN THE WAY OF PARALLELISM

A PROJECT REPORT

Submitted by

Karan R	**311820104015**
Imraan H	**311820104013**
Nithish Kumar S	**311820104030**

In partial fulfillment for the award of

the degree of

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

MOHAMED SATHAK A J COLLEGE OF ENGINEERING
SIRUSERI IT PARK, OMR, CHENNAI-603 103

ANNA UNIVERSITY: CHENNAI 600 025
MAY 2024

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report **"PREDICTING THE HEREDITARY DISORDER IN THE WAY OF PARALLELISM"** is the bonafide work of **"KARAN R (311820104015), IMRAAN H (311820104013), NITHISH KUMAR S (311820104030)"** who carried out the project work under my supervision.

Mr. M. MOHIDEEN ABDULKADER

HEAD OF THE DEPARTMENT

Department of Computer Science and Engineering
Mohammed Sathak A J College of Engineering.,
Siruseri,Chennai-603103

Mr. V. PANDARINATHAN

SUPERVISOR

Assistant Professor
Department of Computer Science an Engineering
Mohammed Sathak A J College of Engineering.,
Siruseri,Chennai-603103

Project Viva-Voice held on 13-05-2024

INTERNAL EXAMINER

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR),
Sipcot - IT Highway Egattur,
Chenai - 603103.

EXTERNAL EXAMINER

ACKNOWLEDGEMENT

First and foremost, we thank the almighty for helping us in all situations for bringing out this project successfully. We thank **OUR PARENTS** for their support throughout the project and also the course. We express our sincere heartfelt gratitude to **ALHAJ JANAB S.M. YOUSUF, Chairman**, and **Mr. MOHAMED SATHAK, Director**, Mohammed Sathak A J College of Engineering, Chennai. We record our immense pleasure in expressing sincere gratitude to our **Principal, Dr. K. S. SRINIVASAN,** Mohammed Sathak A J College of Engineering, for granting permission to undertake the project in our college. We express our sincere thanks to our **Head of the Department, Mr. M. MOHIDEEN ABDULKADER** and our **Project Coordinator, Mr. S. VIMALATHITHAN** Professor, Department of Computer Science and Engineering, Mohammed Sathak A J College of Engineering and **Supervisor, Mr. V. PANDARINATHAN,** Assistant Professor, Mohammed Sathak A.J College of Engineering for their constant encouragement and Guidance for this project. We wish to express our thanks to all the **Faculty Members and Staff Members** in the Department of Computer Science and Engineering for their valuable support throughout the course. We also thank our Friends for their support the project.

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ABSTRACT

Machine Learning is a limb of Artificial Intelligence and computer science which focuses on the use of data and algorithms to imitate the way that humans learn, gradually improving its accuracy and allows software applications to become more accurate at predicting the outcomes without being explicitly programmed. Machine Learning aims to teach a machine how to perform a specific task and identifying patterns with precise returns. In this study, we propose a strategy for forecasting biological anomalies. Because we are aware that each of our biological parents contributes to half of the inherited features in us, we concentrated on estimating inherited abnormalities. It can be difficult to quantify anything accurately, like a biological trait. As a result, we currently possess a plethora of knowledge regarding genetic diseases, and technological development is quickening. Our proposed method employs a classification algorithm to inefficiently evaluate chromosomal abnormalities. It is possible to investigate behavioral patterns, neurological anomalies, visual or auditory impairment, growth retardation, birth defects, problems with the skin and hair, chronic illnesses, developmental disorders, and many other things. We waste a great deal of time and effort diagnosing the illness in the next vibe, which is very expensive. By identifying people who have specific mutations before symptoms occur, a hereditary simulation that gathers data for changes that cause common illnesses could be used to identify people at risk for chronic diseases. Chromosome abnormalities can result from a number of things, such as mutations that alter the nucleotide sequence. A successful outcome with our approach required a Random Forest algorithm to anticipate which autoimmune mutations are likely to emerge in the upcoming years.

CHAPTER - 10
10. CONCLUSION AND FUTURE ENHANCEMENT

CONCLUSION:

The precision of our suggested model increases for chromosomal abnormalities. The decision's knowledge extraction and, consequently, decisions, will be more accurate the more data that are accessible for lifting the decision. Decision tree algorithms, which are used to make choices and are straightforward to use data mining techniques with high predictive accuracy, are one potential approach to abstracting knowledge from historical data. To affect our model, we suggest a uniform catalytic with chromosome symptoms and a random forest. Which data have the highest accuracy. That is determined by the proposed classification technique. Our algorithm quickly eliminates unnecessary information while enhancing the findings' readability and precision. We are also excellent senior communication tools, and this model consistently forecasts sound judgement.

FUTURE ENHANCEMENT:

Our proposed model improves accuracy in chromosomal abnormalities. The more data available for lifting the decision, the more accurate its knowledge extraction, and thus its decisions, will be. A possible idea is to abstract knowledge from historic information into decision tree algorithms, which are used to make decisions and are simple to use data mining techniques with high predictive accuracy. We propose a Chromosome symptom homogeneous catalytic with a random forest to influence our model. The proposed classification method determines which data has the highest accuracy. Our algorithm easily removes redundant parts and improves the readability and accuracy of the results. We are also very useful as executive communication tools, and this model predicts the highest accuracy and good decision-making. Complex issues are less comprehensive in prediction in our process, but this exception will be resolved in the future.

MEDZINE: MEDICINE INVENTORY MANAGEMENT SYSTEM

A PROJECT REPORT

Submitted by

BHUVANESHWARAN P **311820104303**

SURYAKANTH S **311820104310**

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING

MOHAMED SATHAK A J COLLEGE OF ENGINEERING
SIRUSERI IT PARK, OMR, CHENNAI-603103

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report **"MEDZINE: MEDICINE INVENTORY MANAGEMENT SYSTEM"** is the bonafide work of **"BHUVANESHWARAN P (311820104303), SURYAKANTH S (311820104310)"** who carried out the project work under my supervision.

Mr.M.MOHIDEEN ABDUL KADER

HEAD OF THE DEPARTMENT

Department of Computer Science and Engineering
Mohammed Sathak A J College of Engineering.,
Siruseri,Chennai-603103

Mr.V.PANDARINATHAN

SUPERVISOR

Associate Professor
Department of Computer Science an Engineering
Mohammed Sathak A J College of Engineering.,
Siruseri,Chennai-603103

Project Viva-Voice held on 13/5/2024

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

In today's rapidly evolving healthcare landscape, efficient management of medicine inventory is paramount to ensuring the smooth operation of healthcare facilities. The complexity of managing diverse medicine supplies, equipment, and pharmaceuticals necessitates the implementation of robust inventory management systems. This abstract introduces a comprehensive medicine inventory management system designed to streamline the procurement, storage, distribution, and tracking of medicine inventory within healthcare institutions.

The proposed system leverages advanced technology, including cloud-based storage and real-time data tracking, to enhance the efficiency and accuracy of inventory management processes. Key features include inventory cataloging, automated reordering, expiration date tracking, and customizable reporting functionalities. Additionally, the system incorporates user-friendly interfaces tailored to the unique needs of healthcare professionals, enabling seamless integration into existing workflows.

By optimizing inventory control and reducing the risk of stockouts, overstocking, and expiration of medicine supplies, the proposed system aims to improve patient care outcomes, minimize operational costs, and enhance overall organizational efficiency within healthcare settings. Moreover, the system's scalability and adaptability make it suitable for implementation across a range of healthcare facilities, from small clinics to large hospitals.

In conclusion, the development and implementation of a robust medicine inventory management system represent a significant step towards addressing the challenges associated with inventory control in healthcare. By harnessing the power of technology to automate and streamline inventory management processes, healthcare institutions can optimize resource utilization, improve patient care delivery, and ultimately contribute to better healthcare outcomes for all.

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

CHAPTER 7

CONCLUSION AND FUTURE WORK

7.1 FEATURE EXPANSION:

Advanced Reporting and Analytics: The system offers advanced reporting and analytics, including customizable reports for inventory turnover, data visualization through interactive charts and dashboards, and predictive analytics using machine learning models to forecast future demand and optimize inventory levels.

Supplier Management and Inventory Tracking and Traceability: The supplier portal streamlines supplier management by allowing them to view orders, invoices, and product catalogs. It also tracks supplier performance metrics like delivery lead times and product quality. Inventory tracking is enabled by batch or lot numbers, facilitating traceability and recall management. Additionally, expiration date tracking alerts users about upcoming expiration dates, reducing waste and ensuring product freshness.

Mobile Accessibility:

Mobile App: Develop a mobile application for iOS and Android devices, allowing users to access inventory data, place orders, and perform inventory tasks on the go.

Barcode Scanning: Integrate barcode scanning functionality into the mobile app to streamline inventory management tasks such as receiving, picking, and stock-taking.

Workflow Automation and Integration with External Systems:

workflows for inventory-related processes like receiving, picking, packing, and shipping, with automated notifications and task assignments. Integration with ERP systems synchronizes inventory data, financial transactions, and customer information across business functions, while e-commerce platforms enable real-time inventory updates, product listing management, and online order fulfillment.

RESTORE SIGHT FOR BLINDNESS USING VISION TRANSFORMER

A PROJECT REPORT

Submitted by

NAVEEN KUMAR S	311820104029
VINITH D	311820104038
YOGARAJ S	311820104040

In partial for the award fulfillment of the degree

of

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

MOHAMED SATHAK A J COLLEGE OF ENGINEERING
SIRUSERI IT PARK, OMR, CHENNAI-603103

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ANNA UNIVERSITY: CHENNAI 600025

BONAFIDE CERTIFICATE

Certified that this project report **"Bionic Eye Model To Provide Vision Or Restore Sight For Blindness Using Vision Transformer"** is the Bonafide work of " **NAVEEN KUMAR.S (311820104029), VINITH.D (311820104038), YOGARAJ.S (311820104040)** " who carried out the project work under my supervision

Mr. M. MOHIDEEN ABDULKADER
HEAD OF THE DEPARTMENT

Department of Computer Science and Engineering
Mohammed Sathak A J College of Engineering.,
Siruseri,Chennai-603103

Dr.J.PARAMESH
SUPERVISOR
Professor
Department of Computer Science an Engineering
Mohammed Sathak A J College of Engineering.,
Siruseri,Chennai-603103

Project Viva-Voice held on 13/05/2024.

INTERNAL EXAMINER

EXTERNAL EXAMINER

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ABSTRACT

Visual implants are intended to produce an artificial vision leading to some levels of functional vision restoration. It uses 60 microelectrodes implanted in the retina and can improve the quality of life of visually impaired people by making them experience light even if they were in the dark for many years. Due to the limited number of microelectrodes of existing visual system stimulator, the artificial vision they permit has very low resolution. Many researchers have worked on improving the artificial vision created with low resolution implants by using image processing and machine vision algorithms. Users express dissatisfaction with the Retinal Prosthesis System due to the low resolution of phosphine images, visual clarity and improve overall user satisfaction. This project proposes a simulation of the artificial vision in which the information synthesized by the system to the visually impaired user using a visual implants generated low resolution phosphene image. By employing Vision Transformer (ViT), the method extracts valuable information about individuals surrounding the visually impaired user, such as their count, familiarity, gender, estimated ages, s and approximate distances. This data, derived from camera frames on the user's glasses, is utilized to generate signals fed into a visual stimulator, presenting a promising approach to enrich the visual experience for individuals with visual impairments. For each feature, an appropriate algorithm is selected based on its accuracy and time complexity to enable affordable real-time implementations in an autonomous portable system. The proposed system conveys important information about the people around a visually impaired person through audio and to make that person more comfortable to communicate with other people. Thus, this project can be considered for some next generation visual implant systems.

CHAPTER 8

CONCLUSION

8.1. OVERALL REPORT

In conclusion, the project aims to revolutionize the artificial vision experience for visually impaired individuals by integrating advanced technologies and innovative approaches. Through the implementation of Vision Transformer technology, real-time image processing algorithms, and information extraction techniques, the project endeavors to enhance accessibility, promote independence, and improve the overall quality of life for visually impaired users. By addressing key challenges such as limited access to information, navigation barriers, social interaction limitations, and educational and employment obstacles, the project seeks to empower visually impaired individuals to lead more fulfilling and independent lives. The integration of audio output with textto-speech conversion ensures accessible feedback, while the validation with a simulated prosthetic vision and the feasibility analysis for everyday use further solidify the project's potential impact. This project not only aims to improve the daily lives of visually impaired individuals by providing a heightened artificial vision experience but also contributes to the broader field of artificial vision technologies.

8.2. FUTURE SCOPE

In the future, the project envisions significant advancements to enhance the artificial vision system for visually impaired individuals. The development of

VOICE VISAULIZER - OBJECT DETECTION WITH VOICE

A PROJECT REPORT

Submitted by

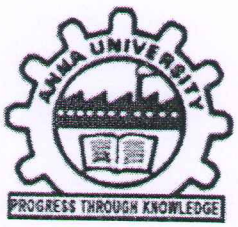
ABDUL KADER JAILANI J	**311820104001**
BARATHWAJ M	**311820104302**
MOHAMED ABDUL KALAM S	**311820104017**

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING



MOHAMED SATHAK A J COLLEGE OF ENGINEERING
SIRUSERI IT PARK, OMR, CHENNAI-603103

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ANNA UNIVERSITY: CHENNAI 600025

BONAFIDE CERTIFICATE

Certified that this project report "VOICE VISAULIZER - OBJECT DETECTION WITH VOICE" is the Bonafide work of" **ABDUL KADAR JAILANI.J (311820104001), BARATHWAJ .M (311820104302), MOHAMED ABDUL KALAM.S (311820104017)** " who carried out the project work under my supervision

Mr. M. MOHIDEEN ABDULKADER
HEAD OF THE DEPARTMENT

Department of Computer Science and Engineering
Mohammed Sathak A J College of Engineering.,
Siruseri,Chennai-603103

Mr. M. MOHIDEEN ABDULKADER
SUPERVISOR
Professor
Department of Computer Science an Engineering
Mohammed Sathak A J College of Engineering.,
Siruseri,Chennai-603103

Project Viva-Voice held on 13-05-2024

INTERNAL EXAMINER

EXTERNAL EXAMINER

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ABSTRACT

This project implements real-time object detection using the YOLOv4-tiny model with OpenCV in Python. The system captures video frames from a webcam and processes them using a pre-trained YOLOv4-tiny model to detect objects within the frames. It utilizes a constant focal length and known object width to estimate the distance of the detected objects from the camera.

Detected objects along with their estimated distances are displayed on the video feed. Additionally, the system employs text-to-speech functionality to audibly announce the class names and distances of the detected objects in real-time. This project provides a practical demonstration of object detection and distance estimation for applications such as surveillance, robotics, and assistive technologies This project aims to address the challenges faced by visually impaired individuals by revolutionizing artificial vision through the integration of a Vision Transformer-based approach.

Current visual implant systems, such as the Retinal Prosthesis System, often encounter user dissatisfaction due to low-resolution images. By leveraging the Vision Transformer, valuable information from the user's surroundings can be extracted, including recognizing people, interpreting facial expressions, and identifying surrounding objects and approximate distances.

CHAPTER 8

CONCLUSION

In this project we used image recognition, voice generation modules for the development of the project. As of now accuracy is good but in case if we want to increase the accuracy we have to train the model with more object/images in the dataset. This project is a small experiment which is useful for blind persons, can be able to find the objects which are surrounded by them, and they are in a position of taking care of themselves when they are outside. The ability of the blind person to stand alone and carry out tasks independently makes this blind assistance device useful for object detection by voice warnings. The device\'s camera serves as the blind person\'s virtual eye, capturing every detail of their environment. The voice alerts keep the person informed about the surroundings so that accidents are decreased. Reduced rely on other parties. There are so many people present in the world who are visually impaired and illiterate from different parts of the world .Some of them do not understand other languages except their local language in their local accent . so, one of the future scope for this project is to develop the idea in which voice alerts in such a way that they can use their own local language.

FUTURE SCOPE

Assistive Technology for Visually Impaired: Object detection with voice feedback can greatly enhance the independence and mobility of visually

SYMPTOSENSE - DISEASE PREDICTION SYSTEM USING MACHINE LEARNING

A PROJECT REPORT

Submitted by

SURYA S	**311820104309**
MANISH PRASAD B	**311820104306**
MONISHWARAN ARUNACHALAM B	**311820104308**

in partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING

MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING

SIRUSERI, CHENNAI – 603 103

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report **"SYMPTOSENSE – DISEASE PREDICTION SYSTEM USING MACHINE LEARNING"** is the bonafide work of **"SURYA S (311820104309), MANISH PRASAD B (311820104306) and MONISHWARAN ARUNACHALAM B (311820104308)"** who carried out the project work under my supervision.

MR.M.MOHIDEEN ABDUL KADER
HEAD OF THE DEPARTMENT

Department of Computer Science and Engineering
Mohamed Sathak AJ College of Engineering,
IT Sipcot, OMR, Siruseri,
Chennai - 603 103.

MRS.N.ANGAYARKANNI
SUPERVISOR
Assistant Professor
Department of Computer Science and Engineering
Mohamed Sathak AJ College of Engineering,
IT Sipcot, OMR, Siruseri,
Chennai - 603 103.

Submitted for the project viva voice held on 13.05.24

INTERNAL EXAMINER

EXTERNAL EXAMINER

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

ABSTRACT

Advancements in technology have indeed transformed the landscape of healthcare, catalyzing a paradigm shift in how we approach diagnosis and treatment. This project represents a significant stride in this direction, aiming to develop a sophisticated diagnostic model capable of identifying various diseases based on their symptoms. Leveraging the power of data mining techniques, particularly classification, this system has revolutionized the way we analyze and interpret medical data.

The foundation of this project lies in the meticulous gathering and refinement of vast datasets containing detailed information about patient diseases. Through careful curation and classification of this data, we have constructed a robust framework for training an intelligent diagnostic agent. At the heart of this system lies the Naive Bayes Algorithm, a powerful tool for classification that calculates the probabilities of different diseases based on the symptoms presented by the patient.

The process is straightforward yet immensely effective: as a patient inputs their symptoms into the system, the Naive Bayes Classifier swiftly analyzes this information and provides probabilities for various diseases. This information empowers patients to make informed decisions about their health, allowing them to contact a doctor promptly for further evaluation and treatment.

This project blends tech and medical expertise to prioritize prevention. Using data and algorithms, we diagnose diseases accurately, empowering individuals proactively. In a world with growing healthcare demands, initiatives like this offer hope for early detection and prevention. As we refine this model, we move towards predictive healthcare, enhancing quality of life.

13 CONCLUSION

Our proposed Disease Prediction System is set to transform healthcare outcomes, offering a substantial improvement in output results. With an unprecedented accuracy rate of nearly 100% on our dataset, surpassing existing systems, our system promises advanced support in assessing one's health status through a simple personal survey. The primary objective of this project is to predict diseases based on symptoms. By taking user symptoms as input and generating disease predictions as output, our system streamlines the diagnostic process, eliminating the need for patients to wait for doctor appointments, thereby saving both time and money.

Furthermore, our system goes beyond mere prediction. Once the anticipated disease is identified, it facilitates access to specialized doctors online, ensuring timely consultations and personalized treatment plans. This not only enhances patient convenience but also accelerates the initiation of necessary medical interventions, potentially saving lives.

Moreover, our proposed system serves as a comprehensive decision support system, providing valuable assistance to physicians in diagnosing illnesses accurately. By leveraging cutting-edge technology, our system integrates data mining techniques and machine learning algorithms to analyze vast amounts of medical data, enabling clinicians to make informed decisions quickly and effectively.

With its potential to enhance early detection and prevention, our Disease Prediction System stands as a significant advancement in the field of healthcare technology. By empowering individuals to take proactive measures towards their health and facilitating timely interventions, our system holds the promise of better health outcomes for all.

CS3811 PROJECT WORK/ INTERNSHIP# L T P C
0 0 20 10

COURSE OBJECTIVES:

To train the students

- For gaining domain knowledge, and technical skills to solve potential business / research problems
- Gather requirements and Design suitable software solutions and evaluate
- alternatives
- To work in small teams and understand the processes and practices in the 'industry.
- Implement, Test and deploy solutions for target platforms
- Preparing project reports and presentation

The students shall individually / or as group work on business/research domains and related problems approved by the Department / organization that offered the internship / project.

The student can select any topic which is relevant to his/her specialization of the programme. The student should continue the work on the selected topic as per the formulated methodology. At the end of the semester, after completing the work to the satisfaction of the supervisor and review committee, a detailed report which contains clear definition of the identified problem, detailed literature review related to the area of work and methodology for carrying out the work, results and discussion, conclusion and references should be prepared as per the format prescribed by the University and submitted to the Head of the department. The students will be evaluated based on the report and viva-voce examination by a panel of examiners as per the Regulations.

TOTAL: 300 PERIODS

COURSE OUTCOMES:

At the end of the project, the student will be able to

CO1: Gain Domain knowledge and technical skill set required for solving industry / research problems

CO2: Provide solution architecture, module level designs, algorithms

CO3: Implement, test and deploy the solution for the target platform

CO4: Prepare detailed technical report, demonstrate and present the work

CS8601 **MOBILE COMPUTING** **L T P C**

OBJECTIVES:

- To understand the basic concepts of mobile computing.
- To learn the basics of mobile telecommunication system .
- To be familiar with the network layer protocols and Ad-Hoc networks.
- To know the basis of transport and application layer protocols.
- To gain knowledge about different mobile platforms and application development.

UNIT I INTRODUCTION **9**

Introduction to Mobile Computing – Applications of Mobile Computing- Generations of Mobile Communication Technologies- Multiplexing – Spread spectrum -MAC Protocols – SDMA- TDMA- FDMA- CDMA

UNIT II MOBILE TELECOMMUNICATION SYSTEM **9**

Introduction to Cellular Systems - GSM – Services & Architecture – Protocols – Connection Establishment – Frequency Allocation – Routing – Mobility Management – Security – GPRS- UMTS – Architecture – Handover - Security

UNIT III MOBILE NETWORK LAYER **9**

Mobile IP – DHCP – AdHoc– Proactive protocol-DSDV, Reactive Routing Protocols – DSR, AODV , Hybrid routing –ZRP, Multicast Routing- ODMRP, Vehicular Ad Hoc networks (VANET) – MANET Vs VANET – Security.

UNIT IV MOBILE TRANSPORT AND APPLICATION LAYER **9**

Mobile TCP– WAP – Architecture – WDP – WTLS – WTP –WSP – WAE – WTA Architecture – WML

UNIT V MOBILE PLATFORMS AND APPLICATIONS **9**

Mobile Device Operating Systems – Special Constraints & Requirements – Commercial Mobile Operating Systems – Software Development Kit: iOS, Android, BlackBerry, Windows Phone – MCommerce – Structure – Pros & Cons – Mobile Payment System – Security Issues

TOTAL 45 PERIODS

OUTCOMES:

At the end of the course, the students should be able to:

- Explain the basics of mobile telecommunication systems
- Illustrate the generations of telecommunication systems in wireless networks
- Determine the functionality of MAC, network layer and Identify a routing protocol for a given Ad hoc network
- Explain the functionality of Transport and Application layers
- Develop a mobile application using android/blackberry/ios/Windows SDK

TEXT BOOKS:

1. Jochen Schiller, "Mobile Communications", PHI, Second Edition, 2003.
2. Prasant Kumar Pattnaik, Rajib Mall, "Fundamentals of Mobile Computing", PHI Learning Pvt.Ltd, New Delhi – 2012

REFERENCES

1. Dharma Prakash Agarval, Qing and An Zeng, "Introduction to Wireless and Mobile systems",Thomson Asia Pvt Ltd, 2005.
2. Uwe Hansmann, Lothar Merk, Martin S. Nicklons and Thomas Stober, "Principles of Mobile Computing", Springer, 2003.
3. William.C.Y.Lee,"Mobile Cellular Telecommunications-Analog and Digital Systems", Second Edition,TataMcGraw Hill Edition ,2006.
4. C.K.Toh, "AdHoc Mobile Wireless Networks", First Edition, Pearson Education, 2002.
5. Android Developers : http://developer.android.com/index.html
6. Apple Developer : https://developer.apple.com/
7. Windows Phone DevCenter : http://developer.windowsphone.com
8. BlackBerry Developer : http://developer.blackberry.com

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

CS8079 **HUMAN COMPUTER INTERACTION** L T P C 3 0 0 3

OBJECTIVES:

- To learn the foundations of Human Computer Interaction.
- To become familiar with the design technologies for individuals and persons with disabilities.
- To be aware of mobile HCI.
- To learn the guidelines for user interface.

UNIT I FOUNDATIONS OF HCI 9

The Human: I/O channels – Memory – Reasoning and problem solving; **The Computer:** Devices – Memory – processing and networks; **Interaction:** Models – frameworks – Ergonomics – styles – elements – interactivity- Paradigms. - **Case Studies**

UNIT II DESIGN & SOFTWARE PROCESS 9

Interactive Design: Basics – process – scenarios – navigation – screen design – Iteration and prototyping. **HCI in software process:** Software life cycle – usability engineering – Prototyping in practice – design rationale. **Design rules:** principles, standards, guidelines, rules. **Evaluation Techniques – Universal Design**

UNIT III MODELS AND THEORIES 9

HCI Models: Cognitive models: Socio-Organizational issues and stakeholder requirements – Communication and collaboration models-**Hypertext, Multimedia and WWW.**

UNIT IV MOBILE HCI 9

Mobile Ecosystem: Platforms, Application frameworks- **Types of Mobile Applications:** Widgets, Applications, Games- Mobile Information Architecture, Mobile 2.0, **Mobile Design:** Elements of Mobile Design, Tools. - **Case Studies**

UNIT V WEB INTERFACE DESIGN 9

Designing Web Interfaces – Drag & Drop, Direct Selection, Contextual Tools, Overlays, Inlays and Virtual Pages, Process Flow - **Case Studies**

OUTCOMES: **TOTAL :45 PERIODS**

Upon completion of the course, the students should be able to:

- Design effective dialog for HCI
- Design effective HCI for individuals and persons with disabilities.
- Assess the importance of user feedback.
- Explain the HCI implications for designing multimedia/ ecommerce/ e-learning Web sites.
- Develop meaningful user interface.

TEXT BOOKS:

1. Alan Dix, Janet Finlay, Gregory Abowd, Russell Beale, "Human Computer Interaction", 3rd Edition, Pearson Education, 2004 (UNIT I, II & III)
2. Brian Fling, "Mobile Design and Development", First Edition, O'Reilly Media Inc., 2009 (UNIT – IV)
3. Bill Scott and Theresa Neil, "Designing Web Interfaces", First Edition, O'Reilly, 2009. (UNIT-V)

CS8792 CRYPTOGRAPHY AND NETWORK SECURITY

L	T	P	C
3	0	0	3

OBJECTIVES:

- To understand Cryptography Theories, Algorithms and Systems.
- To understand necessary Approaches and Techniques to build protection mechanisms in order to secure computer networks.

UNIT I INTRODUCTION 9

Security trends - Legal, Ethical and Professional Aspects of Security, Need for Security at Multiple levels, Security Policies - Model of network security – Security attacks, services and mechanisms – OSI security architecture – Classical encryption techniques: substitution techniques, transposition techniques, steganography- Foundations of modern cryptography: perfect security – information theory – product cryptosystem – cryptanalysis.

UNIT II SYMMETRIC KEY CRYPTOGRAPHY 9

MATHEMATICS OF SYMMETRIC KEY CRYPTOGRAPHY: Algebraic structures - Modular arithmetic-Euclid"s algorithm- Congruence and matrices - Groups, Rings, Fields- Finite fields- SYMMETRIC KEY CIPHERS: SDES – Block cipher Principles of DES – Strength of DES – Differential and linear cryptanalysis - Block cipher design principles – Block cipher mode of operation – Evaluation criteria for AES – Advanced Encryption Standard - RC4 –

Key distribution.

UNIT III PUBLIC KEY CRYPTOGRAPHY 9

MATHEMATICS OF ASYMMETRIC KEY CRYPTOGRAPHY: Primes – Primality Testing – Factorization – Euler's totient function, Fermat's and Euler's Theorem - Chinese Remainder Theorem – Exponentiation and logarithm - ASYMMETRIC KEY CIPHERS: RSA cryptosystem – Key distribution – Key management – Diffie Hellman key exchange - ElGamal cryptosystem – Elliptic curve arithmetic-Elliptic curve cryptography.

UNIT IV MESSAGE AUTHENTICATION AND INTEGRITY 9

Authentication requirement – Authentication function – MAC – Hash function – Security of hash function and MAC – SHA –Digital signature and authentication protocols – DSS- Entity Authentication: Biometrics, Passwords, Challenge Response protocols- Authentication applications - Kerberos, X.509

UNIT V SECURITY PRACTICE AND SYSTEM SECURITY 9

Electronic Mail security – PGP, S/MIME – IP security – Web Security - SYSTEM SECURITY: Intruders – Malicious software – viruses – Firewalls.

TOTAL 45 PERIODS

OUTCOMES:

At the end of the course, the student should be able to:

- Understand the fundamentals of networks security, security architecture, threats and vulnerabilities
- Apply the different cryptographic operations of symmetric cryptographic algorithms
- Apply the different cryptographic operations of public key cryptography
- Apply the various Authentication schemes to simulate different applications.
- Understand various Security practices and System security standards

TEXT BOOK:

1. William Stallings, Cryptography and Network Security: Principles and Practice, PHI 3rd Edition, 2006.

REFERENCES:

1. C K Shyamala, N Harini and Dr. T R Padmanabhan: Cryptography and Network Security, Wiley India Pvt.Ltd
2. BehrouzA.Foruzan, Cryptography and Network Security, Tata McGraw Hill 2007.
3. Charlie Kaufman, Radia Perlman, and Mike Speciner, Network Security: PRIVATE Communication in a PUBLIC World, Prentice Hall, ISBN 0-13-046019-2

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,

CS8691 ARTIFICIAL INTELLIGENCE L T P C
3 0 0 3

OBJECTIVES:

- To understand the various characteristics of Intelligent agents
- To learn the different search strategies in AI
- To learn to represent knowledge in solving AI problems
- To understand the different ways of designing software agents
- To know about the various applications of AI.

UNIT I INTRODUCTION 9

Introduction–Definition - Future of Artificial Intelligence – Characteristics of Intelligent Agents– Typical Intelligent Agents – Problem Solving Approach to Typical AI problems.

UNIT II PROBLEM SOLVING METHODS 9

Problem solving Methods - Search Strategies- Uninformed - Informed - Heuristics - Local Search Algorithms and Optimization Problems - Searching with Partial Observations - Constraint Satisfaction Problems – Constraint Propagation - Backtracking Search - Game Playing - Optimal Decisions in Games – Alpha - Beta Pruning - Stochastic Games

UNIT III KNOWLEDGE REPRESENTATION 9

First Order Predicate Logic – Prolog Programming – Unification – Forward Chaining-Backward Chaining – Resolution – Knowledge Representation - Ontological Engineering-Categories and Objects – Events - Mental Events and Mental Objects - Reasoning Systems for Categories - Reasoning with Default Information

UNIT IV SOFTWARE AGENTS 9

Architecture for Intelligent Agents – Agent communication – Negotiation and Bargaining – Argumentation among Agents – Trust and Reputation in Multi-agent systems.

UNIT V APPLICATIONS 9

AI applications – Language Models – Information Retrieval- Information Extraction – Natural Language Processing - Machine Translation – Speech Recognition – Robot – Hardware – Perception – Planning – Moving

TOTAL :45 PERIODS

OUTCOMES:

Upon completion of the course, the students will be able to:

- Use appropriate search algorithms for any AI problem
- Represent a problem using first order and predicate logic
- Provide the apt agent strategy to solve a given problem
- Design software agents to solve a problem
- Design applications for NLP that use Artificial Intelligence.

TEXT BOOKS:

1 S. Russell and P. Norvig, "Artificial Intelligence: A Modern Approach", Prentice Hall, Third Edition, 2009.

2 I. Bratko, "Prolog: Programming for Artificial Intelligence", Fourth edition, Addison-Wesley Educational Publishers Inc., 2011.

REFERENCES:

1. M. Tim Jones, "Artificial Intelligence: A Systems Approach(Computer Science)", Jones and Bartlett Publishers, Inc.; First Edition, 2008
2. Nils J. Nilsson, "The Quest for Artificial Intelligence", Cambridge University Press, 2009.
3. William F. Clocksin and Christopher S. Mellish," Programming in Prolog: Using the ISO Standard", Fifth Edition, Springer, 2003.
4. Gerhard Weiss, "Multi Agent Systems", Second Edition, MIT Press, 2013.
5. David L. Poole and Alan K. Mackworth, "Artificial Intelligence: Foundations of Computational Agents", Cambridge University Press, 2010.

CS8791 **CLOUD COMPUTING** L T P C
3 0 0 3

OBJECTIVES:

- To understand the concept of cloud computing.
- To appreciate the evolution of cloud from the existing technologies.
- To have knowledge on the various issues in cloud computing.
- To be familiar with the lead players in cloud.
- To appreciate the emergence of cloud as the next generation computing paradigm.

UNIT I INTRODUCTION 9

Introduction to Cloud Computing – Definition of Cloud – Evolution of Cloud Computing – Underlying Principles of Parallel and Distributed Computing – Cloud Characteristics – Elasticity in Cloud – On-demand Provisioning.

UNIT II CLOUD ENABLING TECHNOLOGIES 10

Service Oriented Architecture – REST and Systems of Systems – Web Services – Publish- Subscribe Model – Basics of Virtualization – Types of Virtualization – Implementation Levels of Virtualization – Virtualization Structures – Tools and Mechanisms – Virtualization of CPU – Memory – I/O Devices – Virtualization Support and Disaster Recovery.

UNIT III CLOUD ARCHITECTURE, SERVICES AND STORAGE 8

Layered Cloud Architecture Design – NIST Cloud Computing Reference Architecture – Public, Private and Hybrid Clouds - IaaS – PaaS – SaaS – Architectural Design Challenges – Cloud Storage – Storage-as-a-Service – Advantages of Cloud Storage – Cloud Storage Providers – S3.

UNIT IV RESOURCE MANAGEMENT AND SECURITY IN CLOUD 10

Inter Cloud Resource Management – Resource Provisioning and Resource Provisioning Methods – Global Exchange of Cloud Resources – Security Overview – Cloud Security Challenges – Software-as-a-Service Security – Security Governance – Virtual Machine Security – IAM – Security Standards.

UNIT V CLOUD TECHNOLOGIES AND ADVANCEMENTS 8

Hadoop – MapReduce – Virtual Box -- Google App Engine – Programming Environment for Google App Engine — Open Stack – Federation in the Cloud – Four Levels of Federation – Federated Services and Applications – Future of Federation.

TOTAL: 45 PERIODS

OUTCOMES:

On Completion of the course, the students should be able to:

- Articulate the main concepts, key technologies, strengths and limitations of cloud computing.
- Learn the key and enabling technologies that help in the development of cloud.
- Develop the ability to understand and use the architecture of compute and storage cloud, service and delivery models.
- Explain the core issues of cloud computing such as resource management and security.
- Be able to install and use current cloud technologies.
- Evaluate and choose the appropriate technologies, algorithms and approaches for implementation and use of cloud.

TEXT BOOKS:

1. Kai Hwang, Geoffrey C. Fox, Jack G. Dongarra, "Distributed and Cloud Computing, From Parallel Processing to the Internet of Things", Morgan Kaufmann Publishers, 2012.
2. Rittinghouse, John W., and James F. Ransome, "Cloud Computing: Implementation, Management and Security", CRC Press, 2017.

REFERENCES:

1. Rajkumar Buyya, Christian Vecchiola, S. ThamaraiSelvi, "Mastering Cloud Computing", Tata Mcgraw Hill, 2013.
2. Toby Velte, Anthony Velte, Robert Elsenpeter, "Cloud Computing - A Practical Approach", Tata Mcgraw Hill, 2009.

George Reese, "Cloud Application Architectures: Building Applications and Infrastructure in the Cloud: Transactional Systems for EC2 and Beyond (Theory in Practice)", O'Reilly, 2009.

CS8603 **DISTRIBUTED SYSTEMS** L T P C
3 0 0 3

OBJECTIVES:

- To understand the foundations of distributed systems.
- To learn issues related to clock Synchronization and the need for global state in distributed systems.
- To learn distributed mutual exclusion and deadlock detection algorithms.
- To understand the significance of agreement, fault tolerance and recovery protocols in Distributed Systems.
- To learn the characteristics of peer-to-peer and distributed shared memory systems.

UNIT I INTRODUCTION 9

Introduction: Definition –Relation to computer system components –Motivation –Relation to parallel systems – Message-passing systems versus shared memory systems –Primitives for distributed communication –Synchronous versus asynchronous executions –Design issues and challenges. **A model of distributed computations:** A distributed program –A model of distributed executions –Models of communication networks –Global state – Cuts –Past and future cones of an event –Models of process communications. **Logical Time**: A framework for a system of logical clocks –Scalar time –Vector time – Physical clock synchronization: NTP.

UNIT II MESSAGE ORDERING & SNAPSHOTS 9

Message ordering and group communication: Message ordering paradigms –Asynchronous execution with synchronous communication –Synchronous program order on an asynchronous system –Group communication – Causal order (CO) - Total order. **Global state and snapshot recording algorithms:** Introduction –System model and definitions –Snapshot algorithms for FIFO channels

UNIT III DISTRIBUTED MUTEX & DEADLOCK 9

Distributed mutual exclusion algorithms: Introduction – Preliminaries – Lamport's algorithm – Ricart-Agrawala algorithm – Maekawa's algorithm – Suzuki–Kasami's broadcast algorithm. **Deadlock detection in distributed systems:** Introduction – System model – Preliminaries – Models of deadlocks – Knapp's classification – Algorithms for the single resource model, the AND model and the OR model.

UNIT IV RECOVERY & CONSENSUS 9

Checkpointing and rollback recovery: Introduction – Background and definitions – Issues in failure recovery – Checkpoint-based recovery – Log-based rollback recovery – Coordinated checkpointing algorithm – Algorithm for asynchronous checkpointing and recovery. **Consensus and agreement algorithms:** Problem definition – Overview of results – Agreement in a failure – free system – Agreement in synchronous systems with failures.

UNIT V P2P & DISTRIBUTED SHARED MEMORY 9

Peer-to-peer computing and overlay graphs: Introduction – Data indexing and overlays – Chord – Content addressable networks – Tapestry. **Distributed shared memory:** Abstraction and advantages – Memory consistency models –Shared memory Mutual Exclusion.

TOTAL: 45 PERIODS

OUTCOMES:

At the end of this course, the students will be able to:

- Elucidate the foundations and issues of distributed systems
- Understand the various synchronization issues and global state for distributed systems.
- Understand the Mutual Exclusion and Deadlock detection algorithms in distributed systems
- Describe the agreement protocols and fault tolerance mechanisms in distributed systems.
- Describe the features of peer-to-peer and distributed shared memory systems

TEXT BOOKS:

1. Kshemkalyani, Ajay D., and Mukesh Singhal. Distributed computing: principles, algorithms, and systems. Cambridge University Press, 2011.
2. George Coulouris, Jean Dollimore and Tim Kindberg, "Distributed Systems Concepts and Design", Fifth Edition, Pearson Education, 2012.

REFERENCES:

1. Pradeep K Sinha, "Distributed Operating Systems: Concepts and Design", Prentice Hall of India, 2007.
2. Mukesh Singhal and Niranjan G. Shivaratri. Advanced concepts in operating systems. McGraw-Hill, Inc., 1994.
3. Tanenbaum A.S., Van Steen M., "Distributed Systems: Principles and Paradigms", Pearson Education, 2007.
4. Liu M.L., "Distributed Computing, Principles and Applications", Pearson Education, 2004.

Nancy A Lynch, "Distributed Algorithms", Morgan Kaufman Publishers, USA, 2003

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

CS8601 **MOBILE COMPUTING** L T P C
3 0 0 3

OBJECTIVES:

- To understand the basic concepts of mobile computing.
- To learn the basics of mobile telecommunication system .
- To be familiar with the network layer protocols and Ad-Hoc networks.
- To know the basis of transport and application layer protocols.
- To gain knowledge about different mobile platforms and application development.

UNIT I INTRODUCTION 9

Introduction to Mobile Computing – Applications of Mobile Computing- Generations of Mobile Communication Technologies- Multiplexing – Spread spectrum -MAC Protocols – SDMA- TDMA- FDMA- CDMA

UNIT II MOBILE TELECOMMUNICATION SYSTEM 9

Introduction to Cellular Systems - GSM – Services & Architecture – Protocols – Connection Establishment – Frequency Allocation – Routing – Mobility Management – Security – GPRS- UMTS – Architecture – Handover – Security

UNIT III MOBILE NETWORK LAYER 9

Mobile IP – DHCP – AdHoc– Proactive protocol-DSDV, Reactive Routing Protocols – DSR, AODV , Hybrid routing –ZRP, Multicast Routing- ODMRP, Vehicular Ad Hoc networks (VANET) –MANET Vs VANET – Security.

UNIT IV MOBILE TRANSPORT AND APPLICATION LAYER 9

Mobile TCP– WAP – Architecture – WDP – WTLS – WTP –WSP – WAE – WTA Architecture – WML

UNIT V MOBILE PLATFORMS AND APPLICATIONS 9

Mobile Device Operating Systems – Special Constraints & Requirements – Commercial Mobile Operating Systems – Software Development Kit: iOS, Android, BlackBerry, Windows Phone – MCommerce – Structure – Pros & Cons – Mobile Payment System – Security Issues

TOTAL 45 PERIODS

OUTCOMES:

At the end of the course, the students should be able to:

- Explain the basics of mobile telecommunication systems
- Illustrate the generations of telecommunication systems in wireless networks
- Determine the functionality of MAC, network layer and Identify a routing protocol for a given Ad hoc network
- Explain the functionality of Transport and Application layers
- Develop a mobile application using android/blackberry/ios/Windows SDK

TEXT BOOKS:

1. Jochen Schiller, "Mobile Communications", PHI, Second Edition, 2003.
2. Prasant Kumar Pattnaik, Rajib Mall, "Fundamentals of Mobile Computing", PHI Learning Pvt.Ltd, New Delhi – 2012

REFERENCES

1. Dharma Prakash Agarval, Qing and An Zeng, "Introduction to Wireless and Mobile systems",Thomson Asia Pvt Ltd, 2005.
2. Uwe Hansmann, Lothar Merk, Martin S. Nicklons and Thomas Stober, "Principles of Mobile Computing", Springer, 2003.
3. William.C.Y.Lee,"Mobile Cellular Telecommunications-Analog and Digital Systems", Second Edition,TataMcGraw Hill Edition ,2006.
4. C.K.Toh, "AdHoc Mobile Wireless Networks", First Edition, Pearson Education, 2002.
5. Android Developers : http://developer.android.com/index.html
6. Apple Developer : https://developer.apple.com/
7. Windows Phone DevCenter : http://developer.windowsphone.com
8. BlackBerry Developer : http://developer.blackberry.com

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

CS8082 **MACHINE LEARNING TECHNIQUES** L T P C 3 0 0 3

OBJECTIVES:

- To understand the need for machine learning for various problem solving
- To study the various supervised, semi-supervised and unsupervised learning algorithms in machine learning
- To understand the latest trends in machine learning
- To design appropriate machine learning algorithms for problem solving

UNIT I INTRODUCTION 9

Learning Problems – Perspectives and Issues – Concept Learning – Version Spaces and Candidate Eliminations – Inductive bias – Decision Tree learning – Representation – Algorithm – Heuristic Space Search.

UNIT II NEURAL NETWORKS AND GENETIC ALGORITHMS 9

Neural Network Representation – Problems – Perceptrons – Multilayer Networks and Back Propagation Algorithms – Advanced Topics – Genetic Algorithms – Hypothesis Space Search – Genetic Programming – Models of Evaluation and Learning.

UNIT III BAYESIAN AND COMPUTATIONAL LEARNING 9

Bayes Theorem – Concept Learning – Maximum Likelihood – Minimum Description Length Principle – Bayes Optimal Classifier – Gibbs Algorithm – Naïve Bayes Classifier – Bayesian Belief Network – EM Algorithm – Probability Learning – Sample Complexity – Finite and Infinite Hypothesis Spaces – Mistake Bound Model.

UNIT IV INSTANT BASED LEARNING 9

K- Nearest Neighbour Learning – Locally weighted Regression – Radial Basis Functions – Case Based Learning.

UNIT V ADVANCED LEARNING 9

Learning Sets of Rules – Sequential Covering Algorithm – Learning Rule Set – First Order Rules – Sets of First Order Rules – Induction on Inverted Deduction – Inverting Resolution – Analytical Learning – Perfect Domain Theories – Explanation Base Learning – FOCL Algorithm – Reinforcement Learning – Task – Q-Learning – Temporal Difference Learning

TOTAL :45 PERIODS

OUTCOMES:

At the end of the course, the students will be able to

- Differentiate between supervised, unsupervised, semi-supervised machine learning approaches
- Discuss the decision tree algorithm and indentity and overcome the problem of overfitting
- Discuss and apply the back propagation algorithm and genetic algorithms to various problems
- Apply the Bayesian concepts to machine learning
- Analyse and suggest appropriate machine learning approaches for various types of problems

TEXT BOOK:

1. Tom M. Mitchell, "Machine Learning", McGraw-Hill Education (India) Private Limited, 2013.

REFERENCES:

1. Ethem Alpaydin, "Introduction to Machine Learning (Adaptive Computation and Machine Learning)", The MIT Press 2004.
2. Stephen Marsland, "Machine Learning: An Algorithmic Perspective", CRC Press, 2009.

CS8492 **DATABASE MANAGEMENT SYSTEMS** L T P C
3 0 0 3

OBJECTIVES

- To learn the fundamentals of data models and to represent a database system using ER diagrams.
- To study SQL and relational database design.
- To understand the internal storage structures using different file and indexing techniques which will help in physical DB design.
- To understand the fundamental concepts of transaction processing- concurrency control techniques and recovery procedures.
- To have an introductory knowledge about the Storage and Query processing Techniques

UNIT I RELATIONAL DATABASES 10

Purpose of Database System – Views of data – Data Models – Database System Architecture – Introduction to relational databases – Relational Model – Keys – Relational Algebra – SQL fundamentals – Advanced SQL features – Embedded SQL– Dynamic SQL

UNIT II DATABASE DESIGN 8

Entity-Relationship model – E-R Diagrams – Enhanced-ER Model – ER-to-Relational Mapping – Functional Dependencies – Non-loss Decomposition – First, Second, Third Normal Forms, Dependency Preservation – Boyce/Codd Normal Form – Multi-valued Dependencies and Fourth Normal Form – Join Dependencies and Fifth Normal Form

UNIT III TRANSACTIONS 9

Transaction Concepts – ACID Properties – Schedules – Serializability – Concurrency Control – Need for Concurrency – Locking Protocols – Two Phase Locking – Deadlock – Transaction Recovery - Save Points – Isolation Levels – SQL Facilities for Concurrency and Recovery.

UNIT IV IMPLEMENTATION TECHNIQUES 9

RAID – File Organization – Organization of Records in Files – Indexing and Hashing –Ordered Indices – B+ tree Index Files – B tree Index Files – Static Hashing – Dynamic Hashing – Query Processing Overview – Algorithms for SELECT and JOIN operations – Query optimization using Heuristics and Cost Estimation.

UNIT V ADVANCED TOPICS 9

Distributed Databases: Architecture, Data Storage, Transaction Processing – Object-based Databases: Object Database Concepts, Object-Relational features, ODMG Object Model, ODL, OQL - XML Databases: XML Hierarchical Model, DTD, XML Schema, XQuery – Information Retrieval: IR Concepts, Retrieval Models, Queries in IR systems.

TOTAL: 45 PERIODS

OUTCOMES:

Upon completion of the course, the students will be able to:

- Classify the modern and futuristic database applications based on size and complexity
- Map ER model to Relational model to perform database design effectively
- Write queries using normalization criteria and optimize queries
- Compare and contrast various indexing strategies in different database systems
- Appraise how advanced databases differ from traditional databases.

TEXT BOOKS:

1. Abraham Silberschatz, Henry F. Korth, S. Sudharshan, "Database System Concepts", Sixth Edition, Tata McGraw Hill, 2011.
2. Ramez Elmasri, Shamkant B. Navathe, "Fundamentals of Database Systems", Sixth Edition, Pearson Education, 2011.

REFERENCES:

1. C.J.Date, A.Kannan, S.Swamynathan, "An Introduction to Database Systems", Eighth Edition, Pearson Education, 2006.
2. Raghu Ramakrishnan, —Database Management Systemsll, Fourth Edition, McGraw-Hill College Publications, 2015.

G.K.Gupta,"Database Management Systems", Tata McGraw Hill, 2011.

TEAMTWEAKS

TEAM TWEAKS TECHNOLOGIES PVT. LTD.
Level 5, Citi Centre, 10/11, Dr.Radhakrishnan Salai,
Loganathan Colony, Mylapore,
Chennai – 600004 Tamil Nadu
Ph : 044-2829 2240

31st Oct 2023,

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr.Imraan H(Reg No:311820104013)** has successfully completed 3 months of (02nd August 2023 – 31st October 2023) internship in Flutter App Development at **Team Tweaks Technologies Pvt. Ltd.**

His internship activity includes basics of development in Flutter Applications under the guidance of **Mr. Vivek S and Mr. Subash M – Team Lead - Flutter.** He had majorly involved in learning Flutter Application development in dart language. During the period of his internship program with us he had been exposed to differentprocess which was found hardworking and inquisitive. We wish him every success in the life and career.

Congratulations and Best Wishes!!!

TEAM TWEAKS TECHNOLOGIES PVT. LTD. CHENNAI

MUTHU KUMARAN G

SENIOR HR

PRINCIPAL
Mohamed Sathak A.J. College of Engineering
No.34, Rajiv Gandhi Salai (OMR)
Sipcot - IT Highway Egattur,
Chenai - 603103.

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

S.No	Student Name	Company name
1	AFREEN.H	ZOHO TECH'S
2	DIVYA.A	ZOHO TECH'S
3	DEVI G	ZOHO TECH'S
4	MOHAMED ANIZ.H	ZOHO TECH'S
5	MOHAMED RIZWAN H	ZOHO TECH'S
6	MOHAMED ISMAIL	ZOHO TECH'S
7	MARYAM SHAFA J,S	ZOHO TECH'S
8	D. KARTHIK	ZOHO TECH'S
9	KAVIYA KANNAN	ZOHO TECH'S
10	RITHANYA I	ZOHO TECH'S
11	MOHAMMED AKHIL ABBAS S	ZOHO TECH'S
12	RIYASKHAN N	ZOHO TECH'S
13	NABEEHA RAHIM	ZOHO TECH'S
14	GOKULNATH R	ZOHO TECH'S
15	SIJJIN R	ZOHO TECH'S
16	KASTHURI S	ZOHO TECH'S
17	RITCHARDSON VETRIVEL S	ZOHO TECH'S
18	SYED JUMA FAHIL S	ZOHO TECH'S
19	HASSAN S	ZOHO TECH'S
20	MOHAMMED HAMIM.S	ZOHO TECH'S
21	SHREE HARI	THERMODYN EDUTECH
22	SYEDA ZUHA TANEEM	ZOHO TECH'S
23	VISHALI S	ZOHO TECH'S

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK - JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **H.AFREEN (Reg.No 311821104001)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK-JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **A.Divya (Reg.No 311821104009)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK- JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **Devi.G (Reg.No 311821104007)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK- JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **Devi.G (Reg.No 311821104007)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK-JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **Mohamed Aniz.H (Reg.No 311821104026)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK- JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **MOHAMED RIZWAN H (Reg.No 311821104030)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK- JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **J Mohamed Ismail (Reg.No 311821104029)** pursuing his/her **BE-CSE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK- JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **J.S.MARYAM SHAFA (Reg.No 311831104024)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK- JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **D.karthik (Reg.No 311821104016)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK - JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **Kaviya kannan (Reg.No 311821104018)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

_____

Nandhinee S

Director of Training.

Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK- JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **Rithanya.L (Reg.No 311821104044)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ThermoDyn
Harte Arbeit

THERMODYN EDUTECH

Date: 29.07.2023

TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.MOHAMED AKEEL ABBAS S Reg.No: 311821104025** pursuing Bachelor of Computer Science Engineering in Mohamed Sathak AJ College ofEngineering, Chennai has successfully completed an Internship from 05/07/2023 TO 29/07/2023. During this period his character and conduct was good.

Thermodynedutech ThermoDyn Harte Arbite

For THERMODYN EDUTECH

Director

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK- JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **RIYASKHAN N (Reg.No 311821104045)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK- JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **Nabeeha Rahim (Reg.No 311821104039)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services
No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.
Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK - JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **R.Gokulnath (Reg.No 311821104010)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK-JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **R.Sijin (Reg.No 311821104048)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK-JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **Kasthuri.S (Reg.No 311821104017)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK- JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **S.Richardson vetrivel (Reg.No 311821104043)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK-JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **SYED JUMA FAHIL.S (Reg.No 311821104053)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK- JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **Hassan.S (Reg.No 311821104014)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK- JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **Mohamed Hamim.S (Reg.No 311821104027)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ThermoDyn
Harte Arbeit

THERMODYN EDUTECH

Date: 29.07.2023

TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.B.SHREE HARI** **Reg.No: 311821104047** pursuing Bachelor of Computer Science Engineering in Mohamed Sathak AJ College ofEngineering, Chennai has successfully completed an Internship from 05/07/2023 TO 29/07/2023. During this period his character and conduct was good.

Thermodynedutech ThermoDyn Harte Arbeit

For THERMODYN EDUTECH

Director

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK- JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **Syeda Zuha Tasneem (Reg.No 311821104052)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

ZOHOTECH'S

Training & Placement Services

Certificate of Completion

FULL STACK- JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **Vishali S (Reg.No 311821104060)** pursuing his/her **BE-COMPUTER SCIENCE** at **Mohamed Sathak A.J. College of Engineering Chennai** successfully completed his/her internship in our organization, the period of internship is from. **July 03-2023 to July 20-2023**. His/her has shown keen interest in **Java with Angular UI Development**. His/her attendance and conduct was good during the training period.

We wish his/her all the best towards his/her academic and professional career.

Nandhinee S

Nandhinee S
Director of Training.
Zohotech's Services.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Zohotech's Placement Services

No.44 1st Floor, Mahalakshmi Nagar, Kanchipuram High Road, Chengalpet 603101.

Email: info@zohotechs.com **Phone**: +91 85085 85683

Internship Report on Full Stack Development at ZohoTechs

Vishali.S

Mohammed Sathak A J College of Engineering

DEPT:CSE

Introduction

This internship report provides an overview of my enriching experience as an intern in the Full Stack Development team at ZohoTechs. The internship program spanned 14 days, commencing on 30.06.2023 and concluding on 13.07.2023 through online mode. Throughout this period, I had the opportunity to delve into various aspects of full stack development, honing my skills in modern technologies .

Company Overview

ZohoTechs is a software training company with placement opportunities. ZohoTechs is a prestigious technology company known for its innovative software solutions and cloud-based applications. With a global presence, ZohoTechs serves a diverse clientele and is committed to fostering technological advancements and seamless user experiences.

Internship Objectives

The primary objectives of my internship at ZohoTechs were as follows:

1. To gain hands-on experience in full stack development and understand its comprehensive workflow.
2. To collaborate with skilled developers and learn from their expertise and problem-solving approaches.
3. To solve daily tasks given by ZohoTechs.

Experience and Learning

My internship at ZohoTechs was an invaluable learning journey. I gained practical experience and insights into the following areas as mentioned in week 1 and week 2:

Week 1:

HTML Basics

I started my learning journey by understanding the fundamentals of HTML (Hypertext Markup