

Mohamed Sathak A J College of Engineering, Chennai-603103

Department of Information Technology

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

S.No	Title of IV yr Project	Subject code & Subjects name related to the Projects
1	BlockChain Based File Storage	CS8691 -Artificial Intelligence & CS8082 -Machine Learning & CS8792- Cryptography and Network Security
2	Parkinsons Disease Detection Using Support Vector Machine Algorithm	CS8691 -Artificial Intelligence & CS8082 -Machine Learning & CS8792- Cryptography and Network Security
3	Efficient Facial Based BMI Prediction Using Machine Learning	CS8691 -Artificial Intelligence & CS8082 -Machine Learning Techniques
4	KYAAT- The Kinesics Recognition	CS8691 -Artificial Intelligence & CS8082 -Machine Learning Techniques
5	Book Recommendation System	CS8691 -Artificial Intelligence & CS8791 Cloud Computing
6	Emergency Communication System For Hilly and Forest Regions	CS8792- Cryptography and Network Security
7	Advanced Software Defect Prediction a Novel Machine Learning Framework for Enhanced Accuracy	CS8691 -Artificial Intelligence & CS8082 -Machine Learning Techniques
8	ASK ME A JOB_ TheRecommendation App	CS8691 -Artificial Intelligence & CS8082 -Machine Learning Techniques
9	Advanced NLP Techniques for Automated Summarization of Lengthy Educational Video Content on YouTube	CS8691- Artificial Intelligence & CS8792- Cryptography and Network Security
10	Plant Disease Detection Using Machine Learning Techniques	CS8691 -Artificial Intelligence & CS8082 -Machine Learning Techniques
11	AES-Shield Image Vault	CS8691- Artificial Intelligence & CS8792- Cryptography and Network Security
12	CryptoCom-Secure Communication Application with Secure Enhanced AES Encryption	CS8691 -Artificial Intelligence & CS8082 -Machine Learning Techniques
13	E-Waste Trading Network with BlockChain Integration	CS8691 Artificial Intelligence & CS8792 Cryptography and Network Security



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14	Third EYE Wearable Device for Visually Impaired	CS8792 Cryptography and Network Security
15	Deep Learning Based Segmentation in Classification of Alzheimer's Disease	CS8691 -Artificial Intelligence & CS8082 -Machine Learning Techniques
16	Vision Transformer Based Vision Enhancement for visually Impaired Individuals	CS8691- Artificial Intelligence & CS8792 - Cryptography and Network Security
17	Finding Missing Person Using Email System	CS8691- Artificial Intelligence & CS8792 - Cryptography and Network Security
18	Image Processing Software for Medicinal Plant Identification	CS8691- Artificial Intelligence & CS8082 -Machine Learning Techniques & CS8792- Cryptography and Network Security

  
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**BLOCKCHAIN BASED FILE STORAGE**

**A FINAL YEAR PROJECT REPORT**

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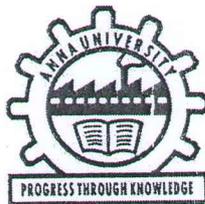
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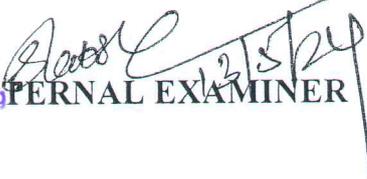
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## ABSTRACT

The emergence of blockchain technology has paved the way for innovative solutions in various domains, including file storage. This paper explores the concept of decentralized file storage systems built on blockchain technology. By leveraging the table and decentralized nature of blockchain, such systems offer enhanced it is used to save a file in the decentralized storage for a secured file transaction into the key components and mechanisms underlying blockchain-based file storage, such as distributed consensus algorithms, smart contracts, and encryption techniques. Furthermore, it discusses the advantages of this approach, including reduced dependency on centralized entities, improved accessibility, and potential cost. The emergence of blockchain technology has paved the way for innovative solutions Savings. Additionally, challenges such as scalability, latency, and regulatory considerations are addressed, along with proposed solutions and future research directions. Overall, blockchain-based file storage presents a promising paradigm shift towards a more secure, transparent, and resilient data storage infrastructure.



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## CHAPTER-8

### CONCLUSION AND FUTURE ENHANCEMENT

#### **Conclusion an future enhancement:**

Blockchain-based file storage presents a promising solution to traditional centralized storage systems by offering decentralization, enhanced security, and immutable records of file transactions. By leveraging distributed ledger technology, users can store their data across a network of nodes rather than relying on a single central authority. This not only reduces the risk of data loss or tampering but also enhances trust in the integrity of the stored files.

However, despite its potential, blockchain-based file storage faces several challenges that need to be addressed for widespread adoption. These include scalability limitations, slow transaction speeds, and complex user interfaces. Furthermore, concerns about energy consumption, particularly in proof-of-work consensus mechanisms, also need to be addressed to make blockchain-based storage more sustainable in the long run.

#### **Future Enhancements:**

To overcome these challenges and further enhance blockchain-based file storage systems, several avenues for improvement can be explored:

**Scalability Solutions:** Research and development efforts should focus on scalability solutions such as sharding, layer-2 protocols, or off-chain scaling solutions. These techniques can help increase the throughput of transactions and improve overall network performance.

**Consensus Mechanisms:** Exploring alternative consensus mechanisms beyond proof-of-work, such as proof-of-stake or delegated proof-of-stake, can reduce energy consumption and improve transaction speeds. Consensus mechanisms tailored specifically for file storage applications could also be developed to optimize performance.

**User Experience:** Simplifying the user experience and making blockchain-based file storage more accessible to non-technical users is crucial for adoption. This includes developing intuitive interfaces, seamless integration with existing applications, and providing clear documentation and support.

**Interoperability and Standards:** Establishing interoperability standards between different blockchain-based storage platforms can facilitate seamless data transfer and interoperability between applications. This would allow users to easily switch between different storage providers without being locked into a specific ecosystem.



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# PARKINSON'S DISEASE DETECTION USING SUPPORT VECTOR MACHINE ALGORITHM

A PROJECT REPORT

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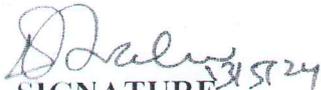
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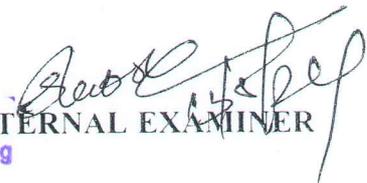
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## ABSTRACT

Parkinson's disease, a progressive neurological disorder, often goes undetected in its initial stages due to the subtle and easily over looked nature of its early symptoms. This neural disease affects the central nervous system, manifesting through tremors, stiffness, changes in facial expressions, and fever. Even medical professionals sometimes struggle to identify Parkinson's in its early phases, leading to delayed diagnosis and treatment, which can exacerbate the condition's effects.

Our project aims to address this critical challenge by developing a highly accurate Parkinson's disease detection system capable of identifying the condition from its earliest stages. We have trained our system on a comprehensive dataset, enabling it to recognize the subtle patterns and biomarkers associated with Parkinson's. By leveraging advanced machine learning techniques and analyzing various physiological signals, our system can provide early detection with high precision.

Early intervention is crucial for managing Parkinson's disease, as it can significantly slow its progression and improve the quality of life for those affected. Our data-driven approach, combined with cutting-edge algorithms, represents a significant step forward in the fight against this debilitating condition. Early detection empowers individuals to seek timely medical attention and appropriate treatment, offering hope and better outcomes for those at risk of Parkinson's disease.

Through our project, we aim to raise awareness about the importance of early detection and provide a reliable tool to identify Parkinson's disease before it progresses to more advanced stages, ultimately improving the lives of those affected by this neurological disorder.

**Keywords:** Parkinson's disease, early detection, machine learning, physiological signals, data-driven, algorithms, early intervention, quality of life, neurological disorder.

## 7 CONCLUSION AND FUTURE SCOPE:

### 7.1 CONCLUSION:

Through this research, we have successfully developed and implemented a robust machine learning model and algorithm for predicting Parkinson's disease using the highly effective Support Vector Machine (SVM) technique. By leveraging the power of SVM, our system can accurately detect the presence of Parkinson's disease from various vocal data inputs, providing a reliable and efficient means for early diagnosis.

Looking ahead, we aim to further enhance the capabilities and user experience of our system. One key improvement will be the integration of microphone functionality directly into devices, allowing for seamless and convenient voice data collection. This integration will provide users with an intuitive interface for interacting with the system, streamlining the process of data acquisition and analysis, and ultimately improving the overall user experience.

Additionally, we plan to incorporate a feature that enables individuals affected by Parkinson's disease to directly connect with and search for suitable medical professionals through a provided link. This addition will empower patients by granting them immediate access to relevant healthcare resources, facilitating prompt diagnosis and treatment, and fostering a more collaborative approach to managing the condition.

Through continuous improvement and the incorporation of these enhancements, our system will become an increasingly powerful tool in the fight against Parkinson's disease. By enabling early detection, improving patient outcomes, and providing direct access to healthcare resources, our system will contribute significantly to improving the quality of life for those affected by this debilitating condition, ultimately making a positive impact on the lives of individuals and their families.

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## 7.2 FUTURE SCOPE:

- 1. Expanding the Dataset:** Continuously expanding and diversifying the dataset used for training the machine learning model is crucial. This can include collecting voice samples from a larger and more diverse population, encompassing different age groups, ethnicities, and linguistic backgrounds. A more comprehensive dataset will enhance the model's ability to generalize and improve its accuracy across a wider range of individuals.
- 2. Multi-Modal Approach:** While the current system relies solely on vocal data, incorporating additional modalities could further improve its performance. This could involve integrating data from various sources, such as handwriting samples, gait analysis, or even brain imaging techniques. A multi-modal approach leveraging multiple biomarkers could provide a more holistic assessment and increase the system's sensitivity in detecting Parkinson's disease.
- 3. Longitudinal Monitoring:** Extending the system's capabilities to enable longitudinal monitoring of patients could be valuable for tracking the progression of Parkinson's disease over time. By regularly collecting and analyzing vocal data, the system could potentially detect subtle changes in speech patterns, allowing for early intervention and personalized treatment strategies.
- 4. Integration with Wearable Devices:** Integrating the system with wearable devices or smart phones could facilitate continuous monitoring and data collection in real-world settings. This could provide valuable insights into the impact of various environmental factors, daily activities, and medication adherence on the symptoms of Parkinson's disease.

**EFFICIENT FACIAL BASED BMI PREDICTION  
USING MACHINE LEARNING**

**A PROJECT REPORT**

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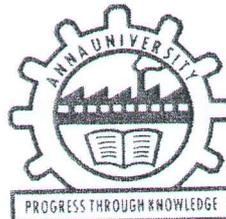
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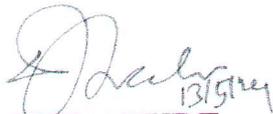
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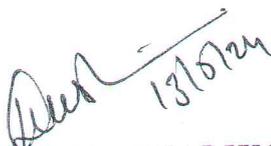
  
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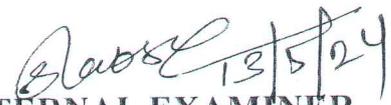
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## ABSTRACT

- ▶ A novel approach to predicting Body Mass Index (BMI) solely from facial images using a Recurrent Neural Network (RNN). Motivated by the importance of BMI as a health metric and the widespread availability of facial recognition technology,
- ▶ we collect a dataset comprising facial images paired with corresponding height and weight measurements. Following preprocessing steps, including normalization of height and weight data and image processing techniques, we devise an RNN architecture.
- ▶ This architecture integrates a Recurrent Neural Network (RNN) to extract facial features and an RNN to incorporate height and weight information. The model is trained on the prepared dataset and evaluated on an independent test set. Results demonstrate the efficacy of our approach in accurately predicting BMI from facial images alone, showcasing the potential of deep learning methods for leveraging facial data in health-related contexts.



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## CHAPTER 8

### CONCLUSION AND FUTURE SCOPE

#### 8.1 Conclusion

- ▶ The development and training of an RNN model for BMI prediction involve several key steps, including data collection, preprocessing, model architecture design, training, and evaluation. By leveraging facial images alongside biometric data, RNN models can learn complex patterns and relationships, enabling them to make informed predictions about individuals' BMI categories.
- ▶ While RNN-based BMI prediction offers numerous advantages, including the ability to analyze visual information and capture temporal dependencies, it also presents certain challenges and considerations. These include the need for robust preprocessing techniques, careful selection of hyperparameters, and the interpretation of model predictions.

#### 8.2 Future Scope

Future enhancements for face-based BMI detection may include integrating multimodal data such as body composition analysis from wearable sensors, improving robustness to variations in facial expressions, and exploring advanced deep learning architectures like attention mechanisms. Additionally, leveraging longitudinal data for continuous BMI monitoring and incorporating personalized feedback systems could enhance user engagement and promote long-term health management. Integration with telemedicine platforms for remote monitoring and intervention may also be explored to broaden accessibility and effectiveness.



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# KYAAT - THE KINESICS RECOGNITION

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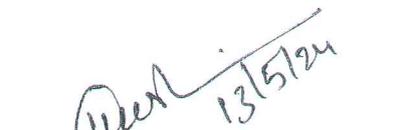
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## ABSTRACT

The Virtual Mouse system revolutionizes Human-Computer Interaction (HCI) by leveraging real-time camera technology to offer an innovative alternative to traditional input methods. By capturing and processing real-time images through a camera, the system extracts precise coordinates for cursor movement, allowing users to control actions through hand gestures. This approach introduces a seamless and accessible interface that transcends the limitations of physical mouse or button presses.

Integrating hand movement further enhances the system's convenience and accessibility, particularly benefiting individuals facing challenges related to hand mobility. By mimicking all the functions of a physical mouse, the Virtual Mouse seamlessly integrates with existing technologies, thereby marking a significant advancement in HCI.

The system's ability to interpret hand gestures provides specially-abled individuals with intuitive control, fostering digital independence and enhancing productivity. This empowerment opens new avenues for inclusivity in the digital realm, ensuring that individuals of diverse abilities can engage with technology effectively.

Overall, the Virtual Mouse represents a pivotal innovation in advancing human-computer interactions across a wide spectrum of user demographics. Its ability to offer intuitive control, accessibility, and seamless integration with existing technologies makes it a game-changer in HCI, promising to redefine how users interact with digital interfaces in both personal and professional settings. This innovation not only enhances the user experience but also contributes to a more inclusive and equitable digital landscape, where technology serves as a tool for empowerment and connectivity for all.

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## CHAPTER 6

### 6.CONCLUSION:

- The accuracy and efficiency plays an important role in making the program as useful as an actual physical mouse, a few techniques had to be implemented.
- After implanting such type of application there is big replacement of physical mouse i.e., there is no need of any physical mouse. Each & every movement of physical mouse is done with this Virtual.
- The basic goal of the virtual mouse system is to control the mouse cursor and complete activities without needing a physical mouse by using hand gestures.
- This proposed system is created by using a webcam (or any built-in camera) that recognises hand gestures and hand tip movement and processes these frames to perform the relevant mouse actions.
- The proposed model has been tested for high sophistication, the virtual mouse can be used for real-time applications.
- Because the proposed mouse system may be operated digitally utilising hand gestures rather than the traditional physical mouse, it will be of more value in combating the propagation of viruses like COVID-19 in the current context.



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# BOOK RECOMMENDATION SYSTEM

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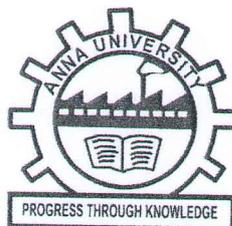
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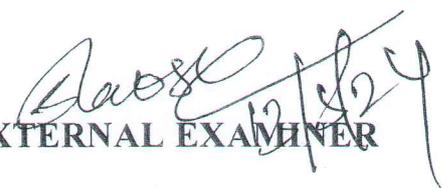
  
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**EXTERNAL EXAMINER**

## ABSTRACT

The rapid growth of digital libraries and online bookstores has led to an overwhelming abundance of available books, making it increasingly challenging for readers to discover new titles suited to their preferences. In response, our project endeavors to develop a sophisticated book recommendation algorithm implemented within a web-based platform. Leveraging the power of machine learning and web development technologies, our system aims to provide personalized book recommendations to users based on their past reading history, preferences, and demographic information.

This project explores a comprehensive range of recommendation algorithms, including collaborative filtering, content-based filtering, and hybrid approaches, to determine the most effective method for generating accurate and relevant book suggestions. Additionally, we delve into the design and implementation of a user-friendly web interface, ensuring seamless interaction and engagement for users of varying technical proficiency.

Through rigorous experimentation and evaluation, we assess the performance of our recommendation algorithm in terms of accuracy, diversity, and user satisfaction. Our findings contribute valuable insights to the fields of recommendation systems and web development, offering practical solutions to enhance the browsing and selection experience for book enthusiasts worldwide.

Overall, this project represents a significant step towards the advancement of personalized recommendation technologies within the realm of literature, facilitating more informed and enjoyable reading experiences for users across diverse backgrounds and interests.



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## CHAPTER 9

### Conclusion:

#### 9.1 Summary of Achievements:

Throughout the development and implementation phases of our project, several key achievements have been realized:

- Successful integration of advanced machine learning algorithms for personalized book recommendations.
- Creation of a user-friendly web application interface facilitating seamless interaction and exploration of recommended books.
- Iterative refinement of the recommendation system, resulting in enhanced accuracy and relevance of suggested reading material.
- Incorporation of social features, fostering community engagement and peer-to-peer book discussions.
- Robust evaluation process involving user testing, feedback analysis, and comparative studies with existing systems, validating the effectiveness and usability of our solution.

These achievements underscore our commitment to delivering a comprehensive and innovative book recommendation platform tailored to the needs and preferences of modern readers.



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## 9.2 Implications and Significance of the Project:

The implications of our project extend beyond the realm of literature consumption, impacting various stakeholders and domains:

- Empowering readers with personalized book recommendations, enhancing their reading experiences and promoting lifelong learning.
- Providing authors and publishers with insights into reader preferences and trends, facilitating targeted marketing strategies and content creation.
- Offering libraries and educational institutions a valuable tool for promoting literacy and fostering a culture of reading among diverse demographics.
- Advancing research in the fields of machine learning, recommendation systems, and web development, contributing to the development of novel algorithms and methodologies.

The significance of our project lies in its potential to reshape the way individuals discover, engage with, and derive value from literature in the digital age, fostering a deeper appreciation for the written word and promoting intellectual exploration and discovery.

## 9.3 Closing Remarks:



In conclusion, our project represents a culmination of creativity, innovation, and dedication aimed at addressing the contemporary challenges

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faced by readers in navigating the vast literary landscape. By harnessing the power of advanced algorithms and intuitive web development, we have created a platform that not only simplifies the process of discovering new books but also fosters a sense of community and camaraderie among readers.

As we embark on the next phase of our journey, we remain committed to refining and expanding our solution, continuously striving to enrich the lives of readers worldwide. We extend our gratitude to all those who have supported and contributed to this endeavour, and we look forward to the continued evolution and impact of our project in the years to come.



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# EMERGENCY COMMUNICATION SYSTEM FOR HILLY AND FOREST REGIONS

A PROJECT REPORT

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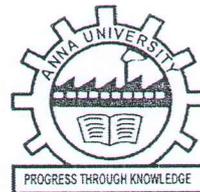
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**MAY 2024**

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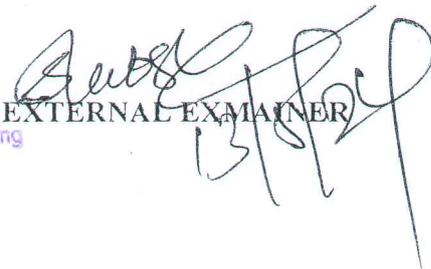
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**EXTERNAL EXAMINER**

## ABSTRACT

This project aims to design and implement an effective emergency communication system tailored for industries situated in hilly and forested regions. The challenging terrain of such environments poses unique obstacles to traditional communication infrastructure. Our proposed solution integrates advanced wireless technologies, sensor networks, and geospatial mapping to establish a robust communication network capable of overcoming natural barriers. The system also incorporates intelligent algorithms for real-time environmental monitoring, enabling early detection of hazards. With a user-friendly interface and scalability features, the developed emergency communication system enhances safety and response capabilities, ensuring timely and efficient communication for industrial operations in challenging terrains.

The goal is to address the unique challenges posed by the rugged terrain and dense vegetation in such environments. By integrating advanced wireless technologies, sensor networks, and geospatial mapping, the system aims to establish a resilient communication infrastructure capable of providing effective coverage despite natural obstacles. The primary objective includes the implementation of intelligent algorithms for real-time environmental monitoring, facilitating early detection of potential hazards. With a focus on user-friendly interfaces and scalability, the project seeks to enhance safety and response capabilities, ensuring reliable and timely communication for industrial operations in challenging terrains.

The proposed system consists of strategically placed LoRa gateways deployed across the targeted area to ensure comprehensive coverage. In times of emergency, individuals can utilize portable LoRa-enabled devices, such as smartphones or dedicated emergency transceivers, to transmit distress signals to the nearest gateway. These signals are then relayed through the LoRa network to a centralized command center, facilitating prompt response and coordination of rescue efforts.

Key features of the system include low power consumption, allowing for extended battery life of deployed devices, and robustness against interference and signal degradation often encountered in remote environments. Furthermore, the use of LoRa technology enables efficient utilization of available spectrum resources, minimizing the infrastructure requirements and associated costs.



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## CHAPTER 7

### 7. CONCLUSION

By integrating cutting-edge technologies, such as LoRa communication, environmental sensors, and intelligent algorithms, the proposed system addresses the limitations of existing infrastructure, offering comprehensive coverage and adaptability to dynamic emergency scenarios. The strategic placement of communication nodes, real-time environmental monitoring, and user-friendly interfaces enhance the system's efficacy in providing timely and reliable communication. Additionally, the scalability and durability of the hardware components ensure the system's sustainability in evolving industrial landscapes. The proposed emergency communication system stands as a robust solution to mitigate risks, facilitate swift responses to emergencies, and ultimately safeguard the well-being of personnel and assets in industries situated in hilly and forested regions.

The development and implementation of the Emergency Communication System (ECS) for Hilly and Forest Regions Using LoRa Technology represent a significant advancement in addressing the communication challenges inherent in remote and rugged terrains. Through a combination of innovative technology and robust infrastructure, the ECS offers a reliable and resilient communication network tailored specifically for emergency situations in these challenging environments.

Throughout this project, we have demonstrated the feasibility and effectiveness of leveraging LoRa technology to establish long-range communication capabilities, overcoming the geographical barriers and connectivity limitations prevalent in hilly and forest regions. By strategically deploying LoRa gateways and utilizing portable LoRa-enabled devices, individuals in remote areas can now quickly and efficiently transmit distress signals and emergency information to designated authorities and responders, facilitating prompt response and coordination of rescue efforts.

The testing and validation procedures conducted during the development of the ECS have confirmed its reliability, performance, and suitability for deployment in real-world scenarios. From range testing to interference testing and field trials, the ECS has consistently demonstrated its ability to maintain communication connectivity and deliver emergency messages promptly and consistently, even under adverse conditions.



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**ADVANCING SOFTWARE DEFECT PREDICTION A NOVEL MACHINE  
LEARNING FRAMEWORK FOR ENHANCED ACCURACY**

**A FINAL YEAR PROJECT REPORT**

*Submitted by*

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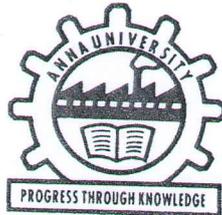
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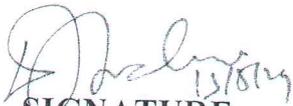
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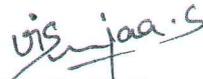
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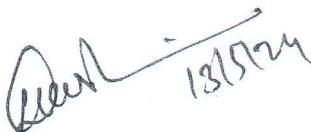
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**EXTERNAL EXAMINER**

## ABSTRACT

Software defect prediction is crucial in software engineering to identify potential defects early and reduce maintenance costs. Traditional methods use statistical and machine learning techniques on metrics from software repositories, but their accuracy is often limited by software complexity.

This project proposes a novel machine learning framework to enhance defect prediction accuracy. Our framework integrates multiple algorithms, feature engineering, and ensemble learning, adept at handling imbalanced datasets and providing interpretable results.

We employ data preprocessing to handle missing values, normalize features, and address class imbalance. We explore various feature selection methods and introduce new features from code complexity and change history.

Diverse machine learning algorithms like decision trees, random forests, SVMs, and neural networks are employed. Our ensemble approach combines these algorithms to improve generalization and reduce overfitting.

We introduce a novel technique for model interpretation, analyzing feature importance to provide insights into the decision-making process.

Experiments on multiple open-source projects demonstrate our approach's superiority in accuracy, precision, recall, and F1-score. Our framework shows robust performance across datasets and can adapt to new projects with minimal tuning.

In conclusion, our proposed framework offers a comprehensive solution for defect prediction, enhancing accuracy and interpretability. By leveraging advanced techniques, developers can build more reliable software systems.

  
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## CHAPTER 9

### 9 CONCLUSION

The proposed software defect prediction system integrates boosting algorithms like Gradient Boosting and AdaBoost with comprehensive feature engineering, demonstrating a significant potential for highly accurate defect identification. By emphasizing accuracy, diverse feature analysis, and adept handling of imbalanced data, the system aims to minimize false positives and improve overall prediction precision. Its adaptability to evolving software environments, combined with enhanced transparency through model interpretation, signifies a notable advancement in defect prediction methodologies. This system's capability to adapt to changing software landscapes ensures its relevance over time, allowing it to effectively identify and mitigate defects in modern software development scenarios. With its ability to provide actionable insights into potential defects and their underlying causes, the system promotes proactive defect prevention, ultimately leading to improved software quality and streamlined development processes. Additionally, the system's transparency enhances trust among developers, enabling more informed decision-making. In summary, the integration of boosting algorithms, comprehensive feature engineering, and adaptability to changing environments represent a significant leap forward in defect prediction methodologies, promising a more reliable and efficient approach to software defect detection and mitigation.



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# ASK ME A JOB

THE RECOMMEDATION APP

A PROJECT REPORT

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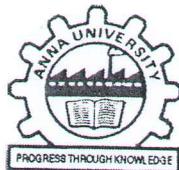
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EXTERNAL EXAMINER

## ABSTRACT

In today's rapidly evolving job market, the challenge of matching individuals with suitable employment opportunities has become increasingly complex. To address this issue, we present a novel application leveraging artificial intelligence (AI) within the Python and Kivy framework to provide personalized job recommendations.

The core functionality of the application revolves around user interaction, starting with inputting their interests. Utilizing AI algorithms, the application suggests relevant job roles based on these interests, offering users a curated selection to choose from. Once a job role is selected, the application prompts the user to specify their preferred job platform (such as LinkedIn or Naukri) and desired location.

Upon receiving this information, the application seamlessly redirects users to the specified job platform, presenting them with real-time job listings matching their selected role and location. This integration streamlines the job search process, eliminating the need for users to manually navigate multiple job platforms and sift through countless listings.

The AI-powered recommendation engine is a key feature of the application, employing advanced algorithms to analyze user interests and preferences, as well as job market trends. Through continuous learning and refinement, the recommendation engine enhances its accuracy over time, ensuring increasingly tailored suggestions for each user.

Moreover, the application prioritizes user experience and accessibility, with an intuitive interface designed using the Kivy framework. This framework allows for cross-platform development, enabling the application to run seamlessly on various devices, including desktops, tablets, and smartphones.

Overall, our project represents a significant advancement in the field of job search and recommendation systems. By harnessing the power of AI and intuitive design principles, our application empowers users to navigate the job market with greater efficiency and confidence, ultimately facilitating more successful job placements and career advancements.

**KEYWORDS :** Interaction ,Job recommendation ,Voice Search, Jobsite Web Automation.



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## 7 CONCLUSION AND FUTURE SCOPE:

### 7.1 CONCLUSION:

In conclusion, the development of our AI-powered job recommendation application represents a significant advancement in the field of career guidance and employment facilitation. Through the integration of cutting-edge technologies such as artificial intelligence, machine learning, and natural language processing, we have created a platform that streamlines the job search process and provides personalized recommendations tailored to individual skills, interests, and preferences.

Our application addresses the inefficiencies and challenges inherent in traditional job search methodologies by leveraging AI algorithms to analyze vast amounts of data and generate relevant job suggestions in real-time. By considering factors such as user profiles, job descriptions, and historical interactions, our recommendation engine delivers accurate and meaningful recommendations, empowering users to make informed decisions about their career paths.

Moreover, our application prioritizes inclusivity and accessibility, ensuring that users from diverse backgrounds and skill levels have equal access to employment opportunities. Through intuitive user interfaces and transparent recommendation algorithms, we strive to foster user trust and engagement, enhancing the overall user experience.

Looking ahead, we recognize the potential for further enhancements and refinements to our application. Future efforts may focus on incorporating additional data sources, refining recommendation algorithms, and integrating feedback mechanisms to continuously improve recommendation quality and user satisfaction.

Overall, our AI-powered job recommendation application represents a transformative solution to the challenges of modern job searching, providing users with the tools and resources needed to navigate the job market with confidence and efficiency. By leveraging technology to match individuals with suitable jobs, we aim to facilitate meaningful career development and empower users to achieve their professional aspirations.



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# Advanced NLP Techniques for Automated Summarization of Lengthy Educational Video Content on YouTube

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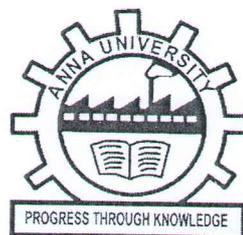
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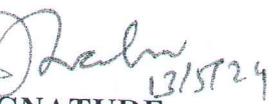
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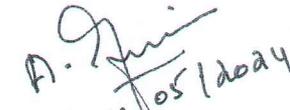
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## ABSTRACT

The exponential growth of educational content on platforms like YouTube, learners are often overwhelmed by the sheer volume of information available. Lengthy educational videos, while rich in content, pose a significant challenge for viewers who seek quick comprehension or review. To address this challenge, this project proposes the development of an automated summarization system using advanced Natural Language Processing (NLP) techniques specifically tailored for educational video content on YouTube. The primary objective of this project is to create a robust and efficient system that can automatically generate concise and informative summaries of lengthy educational videos.

The system will start by preprocessing the video transcripts to extract relevant textual data. Subsequently, it will utilize extractive summarization techniques to identify key sentences or phrases that encapsulate the core concepts discussed in the video. This initial summary will serve as the foundation for further refinement using abstractive summarization methods. By generating novel sentences that capture the essence of the content while maintaining coherence and fluency, the abstractive summarization component will ensure that the final summary is not merely a concatenation of extracted sentences but a coherent piece of text in its own.

The system will incorporate semantic understanding capabilities to discern the context and meaning of the content being summarized. This will enable it to prioritize essential information and exclude redundant or trivial details, thus producing summaries that are both concise and comprehensive. Furthermore, named entity recognition will be employed to identify and highlight key entities such as people, organizations, locations, and important terms, enhancing the readability and utility of the summaries.

The effectiveness of the proposed system will be evaluated through extensive testing and validation using a diverse dataset of educational videos across various domains.

In Summary, this project aims to leverage advanced NLP techniques to alleviate the information overload faced by learners on platforms like YouTube by providing them with concise, informative, and easily digestible summaries of lengthy educational video content.



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like to compare the effectiveness of using these two types of summaries and see how different they affect a user's search behavior.

Apply the proposed framework and methods to other question retrieval/generation tasks. In fact, the problem tackled in this thesis can be formulated as an inverse question-answering task by using given "answers" to find/generate relevant questions, which may have numerous applications in the real world. Although we use product reviews as the experimental dataset, our approach can be applied to other text summarization tasks, such as news, scientific articles, social media, and knowledge bases. Examples of applications include question generation for educational material creation, automatic email responding machine. The framework can even be extended for feeding in more than just text data, such as multimedia data. Examples of applications include generating questions for images and videos.

## 5.4 CONCLUSION

In conclusion, the exploration of advanced Natural Language Processing (NLP) techniques for the automated summarization of lengthy educational video content on platforms like YouTube presents significant opportunities and challenges. Through the implementation of various NLP models such as transformer-based architectures like BERT, GPT, or T5, alongside techniques like extractive or abstractive summarization, researchers and developers have made strides in enhancing the accessibility and utility of educational content online. These techniques offer the promise of condensing lengthy videos into concise summaries, facilitating efficient knowledge acquisition and review for users with limited time or attention spans.

The scalability and generalization of NLP models for summarization across diverse educational domains and languages remain areas of ongoing research. While these models demonstrate remarkable performance on certain datasets, their effectiveness may vary depending on the specific characteristics of the content and the language used.



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# Plant Disease Detection Using Machine Learning Techniques

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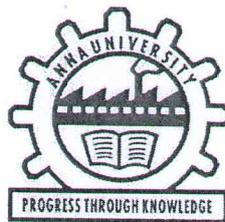
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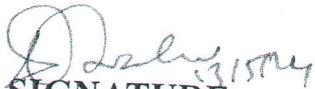
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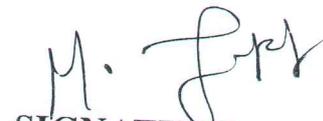
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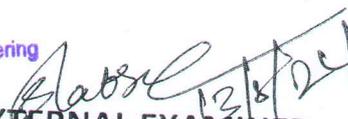
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## ABSTRACT

Plant diseases may have a major impact on food safety, also a considerable decline in agricultural product output. The great majority of automated systems developed thus far are based on digital pictures, allowing for the rapid deployment of algorithms. The difficulty of autonomous illness identification in plants has been solved using traditional machine learning approaches such as (SVM) support vector machines, Multilayer Perception Neural Networks, and Decision Trees. The focus of this article was on leaf plant disease. A new plant leaf disease detection technique has been developed that is based on a transfer learning methodology such as deep learning, where CNN is employed as a feature extractor and SVM is used for classification. A benchmark dataset called PlantVillage was used to assess the evaluation of the proposed model. The suggested model was examined and compared to current methodologies, and it outperformed previous work, achieving an 88.77 percent training accuracy.



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## Conclusion:

It is important to provide a more user-friendly, faster alternative to deep learning calculations, and produce better results with a shorter burning time. It is important to work on unsupervised learning toward supervised learning for unlabeled and labeled datasets. Moreover, we will investigate how non-supervised learning algorithms will affect the plant leaf disease detection.



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# AES-Shielded Image Vault

A FINAL YEAR PROJECT REPORT

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*of*

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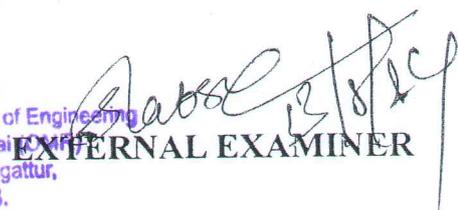
  
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## ABSTRACT

Visual Cryptography is an encryption technique where a secret image is encoded and divided into  $n$  meaningless images, called shares. These shares resemble black and white dots scattered randomly in an image, concealing any information about the original image. Each share is printed on transparent paper, and decryption is achieved by superimposing shares without the need for computer decryption algorithms.

When all  $n$  shares are overlapped, the original picture is revealed. A  $(k, n)$ -threshold visual cryptography involves generating  $n$  shares, with  $k$  being the minimum number of shares required to decrypt the original image. If fewer than  $k$  shares are provided to the decryption function, the output will not provide any clues about the original image.

In an integrated approach, a symmetric encryption algorithm like AES (Advanced Encryption Standard) can be employed for encryption and decryption within the visual cryptography framework. This enhances the security of the system by adding an additional layer of encryption to the shares, further safeguarding the secrecy of the original image.

Visual Cryptography is like a secret picture code. Imagine you have a picture, and you want to keep it safe from prying eyes. Instead of using a complex password, you break the picture into multiple pieces that look like random black and white dots. Each piece, when printed on a clear sheet, doesn't reveal anything about the original picture. But when you put all the pieces together, the original picture magically appears.



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## CHAPTER 6

### 6. CONCLUSIONS

In conclusion, the implementation of encryption and decryption systems is a multifaceted endeavor that demands meticulous attention to various technical, operational, and regulatory aspects. By delving deeper into each component, organizations can fortify their data security strategies and mitigate potential vulnerabilities effectively.

Firstly, the choice of encryption algorithms plays a pivotal role in determining the strength and resilience of the encryption system. Selecting algorithms like AES-256 for symmetric encryption or RSA-4096 for asymmetric encryption ensures robust protection against brute-force attacks and cryptographic vulnerabilities.

Additionally, adopting encryption algorithms that comply with industry standards and certifications, such as FIPS 140-2 for government agencies or ISO/IEC 27001 for information security management, bolsters the credibility and trustworthiness of the encryption implementation.

Key management emerges as a critical challenge in encryption systems, necessitating comprehensive strategies for key generation, storage, distribution, rotation, and revocation. Leveraging hardware security modules (HSMs) or secure key management services (KMS) enhances the security posture by safeguarding encryption keys against unauthorized access or theft. Implementing key lifecycle management practices, including regular audits, key expiration policies, and key escrow mechanisms, fosters resilience and continuity in key management operations.



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Moreover, encryption systems should integrate seamlessly with data integrity and authentication mechanisms to provide comprehensive data protection. Utilizing cryptographic hash functions like SHA-256 or SHA-3 ensures data integrity by detecting any unauthorized modifications or tampering attempts.

Concurrently, incorporating digital signatures based on asymmetric cryptography enhances data authentication and non-repudiation, affirming the origin and authenticity of encrypted data.

Addressing compliance and regulatory requirements constitutes another imperative facet of encryption system implementations. Organizations must align their encryption strategies with relevant data protection laws, industry regulations, and privacy frameworks such as GDPR, HIPAA, PCI DSS, or CCPA.

Adhering to encryption standards prescribed by regulatory bodies, implementing encryption controls for sensitive data handling, and documenting encryption practices in compliance documentation bolster organizational resilience against legal repercussions and data privacy breaches.

Furthermore, the seamless integration of encryption technologies with existing infrastructure, applications, and services optimizes operational efficiency and user experience. Leveraging encryption APIs, software development kits (SDKs), and encryption libraries simplifies encryption integration across diverse platforms and environments.

Collaborating with cloud service providers offering robust encryption capabilities and secure data storage options facilitates scalable and resilient encryption deployments.



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In essence, the successful implementation of encryption and decryption systems rests on a foundation of meticulous planning, comprehensive risk assessment, adherence to industry best practices, and continuous monitoring and improvement.

By embracing encryption as a fundamental pillar of cybersecurity, organizations can fortify their defense mechanisms, safeguard sensitive information, foster customer trust, and navigate the evolving landscape of cyber threats and regulatory challenges with resilience and confidence.



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**CryptoCom – Secure Communication  
Application with SecureEnhanced  
AES Encryption**

**A PROJECT REPORT**

*Submitted by*

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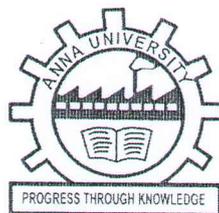
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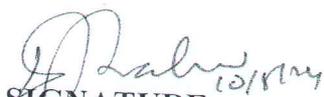
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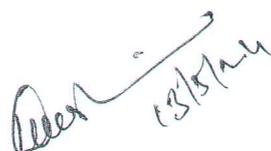
  
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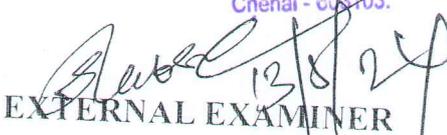
  
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## ABSTRACT

In today's interconnected world, ensuring the security and privacy of personal information is paramount. This project addresses this critical need by developing a sophisticated messaging application for Android devices, designed to provide users with a secure and reliable platform for exchanging messages. Leveraging the power of Firebase for authentication and real-time database management, the application offers seamless user registration and login processes while ensuring data integrity and confidentiality.

One of the key features of the application is its implementation of end-to-end encryption (E2EE) using the Secure Enhanced AES algorithm, which guarantees that messages exchanged between users are encrypted at the source and decrypted only by the intended recipient, thereby preventing unauthorized access and interception. By adopting this advanced encryption technique, the project aims to establish a trustworthy environment where users can communicate freely without compromising their privacy.

Furthermore, the project incorporates a user-friendly interface, prioritizing intuitive design principles and accessibility considerations to enhance the overall user experience. From the moment users log in, they are greeted with a streamlined interface that allows them to effortlessly navigate through the application's various features, including viewing their profile details, managing contacts, and initiating secure chats.



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## CHAPTER 9

### 9 CONCLUSION

In conclusion, this project represents a significant endeavour towards providing users with a secure and efficient messaging platform that prioritizes privacy and data security. Through the integration of advanced encryption techniques, such as Secure Enhanced AES, and robust authentication mechanisms, the application ensures that user communications remain confidential and protected from unauthorized access.

Throughout the development process, key milestones were achieved, including the successful implementation of essential features such as user authentication, encrypted messaging, and seamless user experience design. The rigorous testing and validation procedures conducted have validated the reliability and functionality of the application, confirming its suitability for real-world deployment.

Looking back at the project's objectives, it is evident that significant progress has been made in achieving the goals outlined at the outset. The successful integration of technologies such as Android Studio and Firebase has facilitated the development of a robust and scalable messaging application that meets the needs of modern users while adhering to stringent security standards.

In summary, this project has not only demonstrated the feasibility of building a secure messaging platform using contemporary technologies but has also laid the foundation for future enhancements and innovations in the realm of secure communication. By prioritizing user privacy, data security, and seamless user experience, this project sets a benchmark for the development of secure communication applications in the digital age.

  
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# E-WASTE TRADING NETWORK WITH BLOCKCHAIN INTEGRATION

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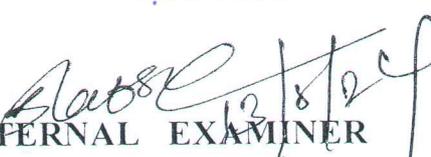
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## ABSTRACT

The generation of electronic waste (E-waste) has reached unprecedented levels, with electronic and smart devices contributing significantly to this problem. Mobile phones and other interconnected smart devices make a significant contribution to the generation of e-waste. To address these issues, this project proposes a distributed, trustless, and secure framework for managing electronic equipment in reverse logistics (RL) activities using blockchain technology. This focuses on the remanufacturing/refurbishing recovery option for electronic devices, and an autonomous and efficient back-end data sharing architecture based on smart contracts and blockchain is developed to track all the remanufacturing / refurbishing processes. Reverse logistics (RL) activities play an essential role in managing e-waste and further prolonging the life-cycle of equipment.

The project includes the integration of real time data collection on electronic waste, the utilization of smart contracts based on blockchain technology to enable transparent tracking and traceability, and the implementation of AI algorithms for identifying counterfeit or non-compliant waste.

The project aims to ensure compliance with recycling regulations and standards, engage stakeholders in responsible recycling practices, and assess the positive environmental impact of the framework. Through these efforts, the project seeks to enhance electronic waste management, promote sustainability, and mitigate the environmental and health risks associated with improper recycling practices



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## CHAPTER-5

### CONCLUSION AND FUTURE ENHANCEMENT

#### CONCLUSION:

The study proposes to develop blockchain platform is E-waste A blockchain enabled e-waste systems where all stakeholders can see and stream real time information about electronics and e-waste movement and easily track the non-compliance of e-waste rules. A blockchain enabled e-waste solution will promote an efficient and environment friendly e-waste management. Blockchain will definitely help towards better statistics on e-waste, eliminating the main data gaps and help measure the effectiveness of legislation to plan for potential improvements in the future. In this paper, we have presented an innovative traceability and auditability framework for RL activities of e-equipment, with a special focus on electronic devices. Based on blockchain technology and its intrinsic characteristics, we have tried to tackle emerging issues in mobile phones RL activities like safeguarding the chain-of-custody for all the remanufacturing/refurbishing activities taking place with a particular focus on managing retained user sensitive data. Also, we have provided a functional implementation through the use of a local private blockchain and various smart contracts.

#### FUTURE ENHANCEMENT:

As future work of the proposed model, the functions included can be improved further to bring reliability in the supply chain management.

1. **Integration of IoT Devices:** Incorporating Internet of Things (IoT) devices can provide real-time data on the condition and location of electronic waste. IoT sensors can monitor temperature, humidity, and other relevant parameters during transportation and recycling, ensuring optimal conditions and detecting



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any abnormalities. This integration can enhance the accuracy of tracking and improve the overall efficiency of the recycling process.

2. **Machine Learning and Artificial Intelligence:** By leveraging machine learning and artificial intelligence techniques, the system can analyze large amounts of data collected from the blockchain and other sources. These technologies can identify patterns, predict recycling outcomes, optimize the recycling process, and provide intelligent recommendations for waste management strategies. Machine learning algorithms can also help detect anomalies or potential counterfeit recycling attempts.
3. **Mobile Application and User Interface Enhancements:** Developing a user-friendly mobile application can enhance the user experience and make it more convenient for users to interact with the system. The application can allow users to easily initiate waste collection requests, track the status of their waste items, and access reports and insights on recycling performance. Improving the user interface of the system can increase user adoption and engagement.
4. **Integration with External Systems:** Integrating the system with external databases, recycling certification bodies, and regulatory authorities can facilitate seamless data exchange and ensure compliance with industry standards and regulations. This integration can enhance the accuracy of data verification and provide a comprehensive view of the entire recycling ecosystem.
5. **Expansion to Other Waste Types:** While the project primarily focuses on electronic waste, future enhancements can include the expansion to other types of waste, such as plastics, batteries, or hazardous materials.



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# THIRD EYE WEARABLE DEVICE FOR VISUALLY IMPAIRED

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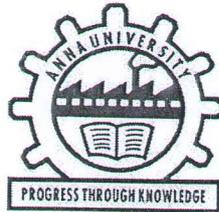
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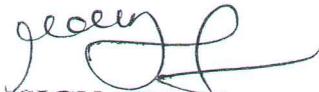
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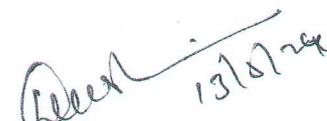
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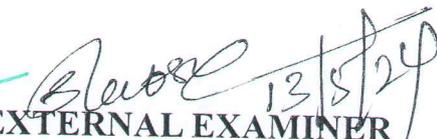
  
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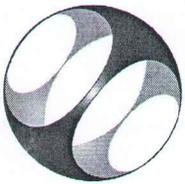
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Spoken Tutorial  
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# Certificate for the Completion of HTML Training

This is to certify that **KISHORE KUMAR.A** has successfully completed **HTML** test organized at **Mohamed Sathak A.J College of Engineering** by **MRS N ANGAYARKANNI** with course material provided by the Spoken Tutorial Project, IIT Bombay. Passing an online exam, conducted remotely from IIT Bombay, is a pre-requisite for completing this training.

**MRS JAYANTHI E** from **Mohamed Sathak A.J College of Engineering** invigilated this examination.  
This training is offered by the Spoken Tutorial Project, IIT Bombay.

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November 8th 2024

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## ABSTRACT

The "Artificial Vision System for the Visually Impaired" is an innovative solution utilizing state-of-the-art computer vision technologies to enhance the perceptual abilities of individuals with visual impairments. This system seamlessly integrates facial recognition, object detection, and optical character recognition (OCR), creating a sophisticated artificial visual interface.

Equipped with a web camera mounted on portable devices, the system proficiently identifies familiar faces, detects common objects, and converts printed text into audible speech. Serving as a vital tool for the visually impaired community, this technology addresses a critical need, fostering inclusivity, and significantly transforming the way individuals with visual impairments interact with their surroundings.

In summary, the "Artificial Vision System for the Visually Impaired" stands as a comprehensive and empowering solution, promoting independence and reshaping the daily experiences of those with visual impairments.

**Keywords**— Artificial Vision System, Visual Impairment, Computer Vision, Facial Recognition, Object Detection, OCR, Assistive Technology, Accessibility, Web Camera, Audible Speech, Independence, Innovative Solution.



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## 7.CONCLUSION:

In conclusion, the integration of face recognition, text recognition, and object detection technologies holds profound implications for the lives of visually impaired individuals, offering new avenues for accessibility, independence, and inclusion.

For visually impaired individuals, face recognition technology serves as a powerful tool for enhancing social interactions and personal safety. By accurately identifying individuals in real-time, these systems enable users to recognize familiar faces, navigate crowded environments, and engage in more meaningful social interactions.

Text recognition capabilities offer another layer of accessibility for visually impaired individuals, allowing them to access printed materials and digital content with greater ease and independence. By converting printed text into digital formats, OCR technology enables users to read books, documents, signs, and labels using specialized assistive devices or software applications.

Object detection technology plays a crucial role in enhancing the mobility and safety of visually impaired individuals, enabling them to navigate their surroundings with greater confidence and awareness. By detecting and identifying obstacles, hazards, and landmarks in real-time, these systems provide users with valuable auditory or haptic feedback to help them avoid collisions and navigate complex environments more effectively.



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# Vision Transformer Based Vision Enhancement for Visually Impaired Individuals

A PROJECT REPORT

Submitted by

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*in partial fulfilment for the award of the degree of*

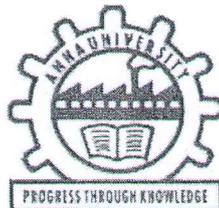
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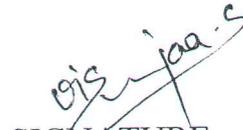
MAY 2024

## BONAFIDE CERTIFICATE

Certified that this project report "Vision Transformer Based Vision Enhancement For Visually Impaired Individuals" is the bonafide work of **SYED ANEES A (311820205048), MUBARAK ALI J (311820205025)** and **MOHAMED SIDIQ I (311820205020)** who carried out the project under my supervision.

  
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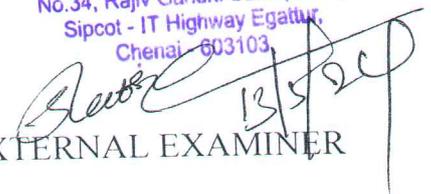
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## ABSTRACT

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, highlighting the critical need for focused research to enhance 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, facial emotions, surrounding objects 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.

  
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## CHAPTER 8

### CONCLUSION

#### 8.1. Conclusion

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 text-to-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. By fostering accessibility, independence, and user satisfaction, the project strives to set a benchmark for future innovations in visual implant systems. Moreover, by laying the groundwork for next-generation visual implant systems and exploring integration with existing visual implant technologies, the project sets the stage for continuous advancements in the field of artificial vision. Through user satisfaction assessments and feedback collection, the project aims to continually refine and improve the developed solutions to better meet the needs of visually impaired individuals.



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## CHAPTER 8

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# FINDING MISSING PERSON USING EMAIL SYSTEM

## A PROJECT REPORT

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VINEETH BABA K B

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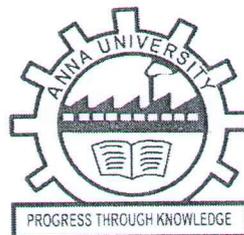
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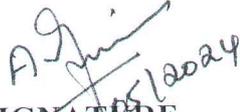
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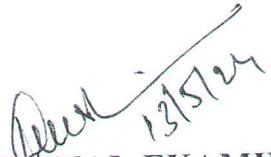
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EXTERNAL EXAMINER

  
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## ABSTRACT

In the world, a countless number of people are missing every day which includes kids, teens, mentally challenged, old-aged people with Alzheimer's, etc. Most of them remain untraced. This paper proposes a system that would help the police and the public by accelerating the process of searching using face recognition. Face recognition technique can be used for many things and finding the missing person is a biggest advantage for any face recognition technique. To make the task of finding the missing person easier we are planning to make an application which will be accessed by some volunteers through which we can find missing person in short span of time. This will make the work of police to find a particular person easier. Meanwhile, there is a need of automation for automating the task of finding the particular person by recognizing particular image and comparing that image with other image in order to check whether both images has same characteristics or not. By doing this we will come to know whether the missing person in the image clicked from particular location is correct or not, and if it is correct then police can start their next steps to find the person from that area.



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## CHAPTER 7

### CONCLUSION AND FUTURE ENHANCEMENT

#### 7.1 CONCLUSION

In conclusion, the "Finding the Missing Person Using Face Match Making Algorithm with User and Admin Dashboard" project is a valuable tool for locating missing persons and enhancing public safety. The project utilizes advanced technologies such as facial recognition and machine learning algorithms to increase the accuracy and speed of the search process. By creating a database of known individuals and continuously updating it, the system is able to compare images of missing persons with potential matches, thus increasing the chances of locating the missing person. The user-friendly interface and admin dashboard make it easy for users to submit images of missing persons and for administrators to manage the system. The success of the project will be measured by its ability to locate missing persons and reunite them with their families. The project has the potential to revolutionize the way missing persons are located, and it represents a significant step forward in the use of technology for public safety. Overall, the "Finding the Missing Person Using Face Match Making Algorithm with User and Admin Dashboard" project is a valuable contribution to society, and it has the potential to save lives and bring peace of mind to families affected by missing persons.



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## 7.2 FUTURE ENHANCEMENTS

Finding missing persons using AI is a promising approach that can help locate and reunite missing individuals with their families. However, there is always room for improvement, and the following enhancements could be made to make the technology more effective and efficient:

**Improved accuracy:** The accuracy of AI models used for finding missing persons could be improved to reduce false positives and false negatives in identifying missing individuals.

**More data sources:** The technology could be expanded to include data from a wider range of sources, such as social media and surveillance cameras, to improve the accuracy of identifying missing persons.

**Real-time monitoring:** The technology could be developed to enable real-time monitoring of missing persons, enabling early detection and intervention.

**More comprehensive profiles:** The profiles of missing persons could be made more comprehensive, including information such as medical history, dental records, and tattoos, to improve the accuracy of identification.

**Integration with social services:** The technology could be integrated with social services, such as homeless shelters and mental health clinics, to improve the identification and care of missing individuals.

**User-friendly interface:** The user interface of the technology could be improved to make it more user-friendly and accessible for individuals and families searching for missing loved ones.



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**Mobile applications:** The technology could be developed into a mobile application that individuals can use to report missing persons and receive real-time updates on search efforts.

**Integration with law enforcement:** The technology could be integrated with law enforcement databases to improve communication and collaboration in the search for missing persons.

**Early warning systems:** The technology could be developed to provide early warning systems for individuals at high risk of going missing, such as those with cognitive impairments.

**Cloud-based processing:** The use of cloud-based processing could improve the speed and accuracy of AI models used for finding missing persons by offloading processing to more powerful servers.



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# Image Processing Software for Medicinal Plant Identification

A FINAL YEAR PROJECT REPORT

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RAFIQ SHERIFF S	311820205034

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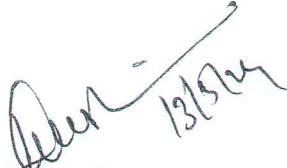
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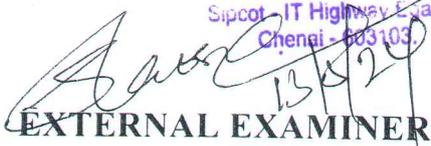
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## ABSTRACT

This project aims to develop image processing software using machine learning (ML) to identify medicinal plants, with the primary objective of enhancing authenticity and ensuring integrity in the medicinal plant supply chain. By leveraging advanced ML techniques, we seek to create a robust system capable of accurately identifying various medicinal plant species from images, thereby mitigating the risks associated with misidentification, substitution, and adulteration in the supply chain. Through this initiative, we aim to contribute to the promotion of quality assurance, traceability, and sustainability in the medicinal plant industry.

The software leverages cutting-edge computer vision algorithms and deep learning techniques to analyze botanical images and classify plant species based on their visual characteristics. Developed with the specific needs of researchers and botanists in mind, the software provides an intuitive user interface for uploading, processing, and analyzing plant images. Key features include automated image segmentation, feature extraction, and classification using pretrained models or customizable deep learning architectures. The software facilitates the rapid and accurate identification of medicinal plants, aiding in biodiversity conservation, herbal medicine research, and pharmacological studies. Its versatility and scalability make it a valuable tool for both academic research and industrial applications in the field of plant science and healthcare.



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## CHAPTER 10

### 10. CONCLUSION :

In conclusion, the development of image processing software for medicinal plant identification represents a significant advancement in the field of botanical sciences and healthcare. Through the integration of machine learning, computer vision, and domain expertise, our project aims to address critical challenges in the medicinal plant supply chain, including authenticity, traceability, and sustainability.

The image processing software offers a reliable and efficient solution for accurately identifying medicinal plant species from images, mitigating risks associated with misidentification, substitution, and adulteration. By leveraging advanced ML techniques and data-driven approaches, we can enhance the integrity and reliability of the medicinal plant trade, ensuring consumer safety and product quality.

Throughout the project, we have conducted thorough research, analysis, and design to develop a robust software system that meets the needs of researchers, botanists, and industry professionals. By incorporating user-friendly interfaces, scalable architectures, and rigorous testing methodologies, we have created a solution that is accessible, efficient, and reliable.

Looking ahead, there are numerous opportunities for further enhancement and innovation in the field of medicinal plant identification. By embracing emerging technologies, collaborating with stakeholders, and promoting interdisciplinary research, we can continue to advance the frontiers of botanical sciences and healthcare.

In conclusion, our project represents a significant step forward in promoting quality assurance, traceability, and sustainability in the medicinal plant industry. By fostering transparency, trust, and collaboration, we can create a safer, more reliable future for medicinal plant trade and contribute to the well-being of communities around the world



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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.
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**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 identify 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

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**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.

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

**PRINCIPAL**

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

**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. Behrouz A. 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

**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.

**OUTCOMES:****TOTAL: 45 PERIODS**

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

Mghamed Sathak A.J. College of Engineering  
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Chennai - 603103.

**Deep Learning Based Segmentation in Classification of  
Alzheimer's Disease**

**A PROJECT REPORT**

*Submitted by*

<b>Muhammed Midlaj A C</b>	<b>311820205026</b>
<b>Nandhini R</b>	<b>311820205027</b>
<b>Rahimunnisa S</b>	<b>311820205035</b>

*In partial fulfillment for the award of the degree*

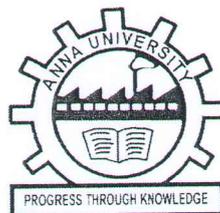
*of*

**BACHELOR OF TECHNOLOGY**

*in*

**INFORMATION TECHNOLOGY**

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



**PRINCIPAL**

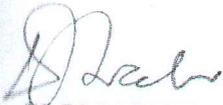
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Sipcot - IT Highway Egattur,  
Chennai - 603103.**

**ANNA UNIVERSITY: CHENNAI 600 025**

**MAY 2024**

## BONAFIDE CERTIFICATE

Certified that this project report titled "Deep Learning Based Segmentation in Classification of Alzheimer's Disease" is the bonafide work of "MUHAMMED MIDLAJ A C (311820205026), NANDHINI R (311820205027), RAHIMUNNISA S (311820205035)" who carried out the project work under my supervision.

  
SIGNATURE

Dr. D. PRAKASH, M.E., M.Tech., Ph.D.

**HEAD OF THE DEPARTMENT**

Department of Information Technology  
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Mrs. R. Priya, M.E.,

**SUPERVISOR**

Department of Information Technology  
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Engineering  
Siruseri, Chennai - 603 103.

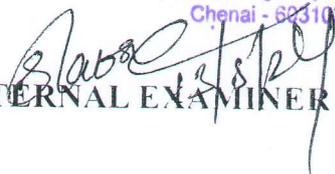
Submitted for the university practical examination held at **MOHAMMED SATHAK**

**A.J COLLEGE OF ENGINEERING, CHENNAI** on ...13..05..2024....

  
**PRINCIPAL**

Mohamed Sathak A.J. College of Engineering  
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Chennai - 603103.

  
INTERNAL EXAMINER

  
EXTERNAL EXAMINER

## ABSTRACT

Alzheimer's disease is a progressive neurodegenerative disorder characterized by contributing to improved patient care and outcomes. Then, design a CNN architecture with convolutional layers to automatically learn relevant features. Train the model using labeled data, where images are segmented into regions of interest. Fine-tune hyperparameters to optimize performance. cognitive decline and memory loss. Early detection of Alzheimer's disease is crucial for timely intervention and management. This abstract presents a matlab-based software tool designed to aid in the analysis and diagnosis of Alzheimer's disease. The tool utilizes various machine learning algorithms and image processing techniques to analyze medical imaging data such as magnetic resonance imaging(MRI) and positron emission tomography (PET) scans. It incorporates features for image preprocessing, segmentation of brain structures, and extraction of relevant biomarkers indicative of Alzheimer's disease progression. Additionally, the tool offers visualization capabilities to facilitate the interpretation of results and the communication of findings to healthcare professionals. Through the integration of advanced computational methods, this software tool aims to enhance the accuracy and efficiency of Alzheimer's disease diagnosis, ultimately During inference, input a new MRI image, and the trained CNN will segment brain regions. Extract features from segmented regions and feed them into a classification layer.

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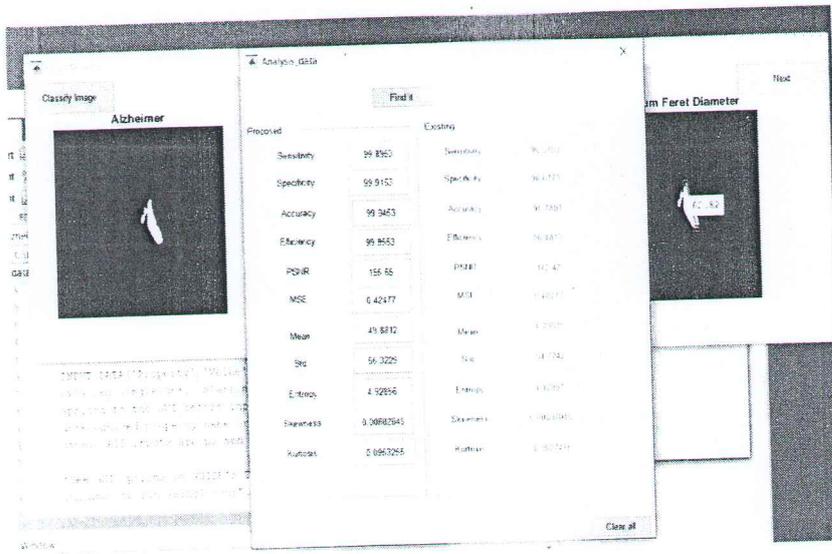


Figure 5.4 Analysis data

## CHAPTER 6

### 6.CONCLUSION AND FUTURE ENHANCEMENTS

#### 6.1 Conclusion

In conclusion, the MATLAB-based software tool developed for the analysis and diagnosis of Alzheimer's disease (AD) represents a significant advancement in the field of neuroimaging and computational healthcare. By integrating state-of-the-art machine learning algorithms and image processing techniques, the system offers clinicians a powerful tool for early detection and intervention in AD cases. The system's modular architecture, encompassing image preprocessing, brain structure

  
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segmentation, biomarker extraction, and machine learning model development, enables accurate and efficient analysis of diverse imaging datasets. Furthermore, the emphasis on user-friendliness and interpretability ensures that healthcare professionals can confidently interpret and communicate diagnostic results, facilitating informed decision-making and personalized patient care. Moving forward, continued research and development efforts will focus on further improving the system's performance, scalability, and clinical utility. Ultimately, the proposed software tool holds great promise for enhancing the accuracy, efficiency, and accessibility of AD diagnosis, thereby contributing to improved patient outcomes and quality of life.

## 6.2 Future Enhancements

Future enhancements to the proposed system could focus on several key areas to further improve its capabilities and utility in the diagnosis and management of Alzheimer's disease. One avenue for enhancement is the incorporation of multimodal imaging data, including not only MRI and PET scans but also other imaging modalities such as functional MRI (fMRI), diffusion tensor imaging (DTI), and amyloid imaging. Integrating information from multiple imaging modalities can provide complementary insights into AD pathology, allowing for more comprehensive analysis and potentially improving diagnostic accuracy.

  
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**MOHAMED SATHAK A J COLLEGE OF ENGINEERING, Chennai - 603103**

**CONSOLIDATED INTERNSHIP DETAILS FOR THE PERIOD OF ODD / EVEN SEM 2023 / 20 24**

**Department : INFORMATION TECHNOLOGY**

**Academic Year:2023-2024**

S.No	Name of the student	Sem/Year	Name of the Industry	Contact Person Details	Period	#Type of Training
1	Mohamed Afsar.M	VIII/IV	Shiash Info Solution Private Limited	Ashwin Kanniyappan	March 2023 to May 2023	Python
2	Seyed Ahamed Ifthh	V/III	Zohotech's Placement Services	Nandhineee.S	July2023 to July 2023	Java with Angular UI Development
3	Ashik Ahamed.N	V/III	Zohotech's Placement Services	Nandhineee.S	July2023 to July 2023	Java with Angular UI Development
4	Sadhman Hussain.J	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
5	sahana Serin.H	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
6	Sarath.S	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
7	Sathish Kumar.D	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
8	Shahul Hamed.S.N	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
9	Sri Balaji.S	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
10	Srithar.S	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
11	Khaja Nawaz	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
12	YuvaRaj.K	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
13	Shameel Ahamed	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
14	Rafiudeen	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
15	Prajesh Ram	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
16	Samsan.N	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
17	Mohammed Owaiz	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
18	Mohamed Vasim.G	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
19	Mohammed Syed Ibr	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
20	Sumesh.M	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
21	Kalaiselvan.R	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
22	Vishal.K.H	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
23	Imran.T	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
24	Harish.R	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
25	Mohamed Farhaan.U	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
26	Ganapathi.M	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
27	Abdul Basith Ahame	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
28	Basim.S	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
29	Basurdeen Ahmed.N	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
30	Dwaraka.J.S	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
31	Abdul Razaq.U	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
32	Vengadesan.G	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	COVID Vaccination Booking Web Applicat
33	Rehana Khanm.A	V/III	Thermodyn Edutech	Nandhineee.S	5 July2023 to 29 July 2023	Java with Angular UI Development
34	Mugilan.M	V/III	Thermodyn Edutech	Nandhineee.S	6 July2023 to 29 July 2023	Java with Angular UI Development

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35	Manikanadan.P	V/III	Thermodyn Edutech	Nandhinee.S	7 July2023 to 29 July 2023	Digital Library Website
36	Mohamed Mujammi	V/III	Zohotech's Placement Services	Nandhinee.S	3July2023 to 20 July 2023	Java with Angular UI Development
37	Junaith Akther.A	V/III	Zohotech's Placement Services	Nandhinee.S	3July2023 to 20 July 2024	Java with Angular UI Development
38	Mohamed Kalith.A	V/III	Zohotech's Placement Services	Nandhinee.S	3July2023 to 20 July 2025	Java with Angular UI Development
39	Aadil Hathim.A	V/III	Zohotech's Placement Services	Nandhinee.S	3July2023 to 20 July 2026	Java with Angular UI Development
40	Mohamed Harshath	V/III	Zohotech's Placement Services	Nandhinee.S	3July2023 to 20 July 2027	Java with Angular UI Development
41	Dhanusiya.M	V/III	Zohotech's Placement Services	Nandhinee.S	3July2023 to 20 July 2028	Java with Angular UI Development
42	Prarthana.B	V/III	Zohotech's Placement Services	Nandhinee.S	3July2023 to 20 July 2029	Java with Angular UI Development
43	A.Akshaya	V/III	Zohotech's Placement Services	Nandhinee.S	3July2023 to 20 July 2030	Java with Angular UI Development
44	Durga Devi.K	V/III	Zohotech's Placement Services	Nandhinee.S	3July2023 to 20 July 2031	Java with Angular UI Development
45	Abiramasundari.M	V/III	NLC India Limited	Nandhinee.S	26 june 2023 to 22 july2023	Web Based IT Asset Management System
46	Nishad Nazeer.N	V/III	Zohotech's Placement Services	Nandhinee.S	3July2023 to 20 July 2023	Java with Angular UI Development
47	Nithya Sree.G	V/III	Zohotech's Placement Services	Nandhinee.S	3July2023 to 20 July 2023	Java with Angular UI Development
48	Mohamed Yasir.S	V/III	Zohotech's Placement Services	Nandhinee.S	3July2023 to 20 July 2023	Java with Angular UI Development
49	Muhammad Hafiz.S.	V/III	Zohotech's Placement Services	Nandhinee.S	3July2023 to 20 July 2023	Java with Angular UI Development

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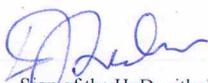
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#Type of Training: Service/Product/Software/Tools/Management Based

Faculty Coordinator

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Rev. Date: 04.01.21

  
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# THERMODYN EDUTECH

Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.T.IMRAN**  
**Reg.No: 311821205018** pursuing Bachelor of Information Technology in  
Mohamed Sathak AJ College of Engineering, Chennai has successfully  
completed an Internship from 05/07/2023 TO 29/07/2023. During this period  
his character and conduct was good.



For THERMODYN EDUTECH

Director

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

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Training & Placement Services

## Certificate of Completion

FULL STACK- JAVA WITH ANGULAR CERTIFIED  
DEVELOPER

We hereby certify that **Durga devi.K (Reg.No 311821205012)** pursuing his/her **BE-IT** 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.

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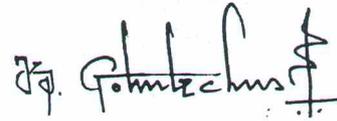
Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.K.H.VISHAL**  
**Reg.No: 311821106024** pursuing Bachelor of Information Technology in  
Mohamed Sathak AJ College of Engineering, Chennai has successfully  
completed an Internship from 05/07/2023 TO 29/07/2023. During this period  
his character and conduct was good.



For THERMODYN EDUTECH

  
  
Director

**PRINCIPAL**  
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**34, Rajiv Gandhi Road (OMR), Siruseri, IT Park**  
**Chennai-603 103.**



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Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.R.KALAISELVAN, Reg.No: 311821205020**, pursuing Bachelor of Information Technology in Mohamed Sathak AJ College of Engineering, Chennai has successfully completed an Internship from 05/07/2023 TO 29/07/2023. During this period his character and conduct was good.



For THERMODYN EDUTECH

   
Director

**PRINCIPAL**  
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**34, Rajiv Gandhi Road (OMR), Siruseri, IT Park**  
**Chennai-603 103.**



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Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.M.SUMESH Reg.No: 311821205059** pursuing Bachelor of Information Technology in Mohamed Sathak AJ College of Engineering, Chennai has successfully completed an Internship from 05/07/2023 TO 29/07/2023. During this period his character and conduct was good.



For THERMODYN EDUTECH

   
Director

**PRINCIPAL**  
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**Chennai-603 103.**



Training & Placement Services

## Certificate of Completion

FULL STACK JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **MOHAMED MUJAMMIL.M** (Reg.No **311821205028**) pursuing his/her **BE-IT** 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.

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Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.P.MANIKANADAN Reg.No: 311821205023** pursuing Bachelor of Information Technology in Mohamed Sathak AJ College of Engineering, Chennai has successfully completed an Internship from 05/07/2023 TO 29/07/2023. During this period his character and conduct was good.



For THERMODYN EDUTECH

   
Director

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



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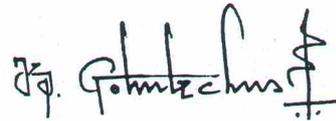
Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr. MOHAMMED SYED IBRAHIM**  
**Reg.No: 311821205030** pursuing Bachelor of Information Technology in  
Mohamed Sathak AJ College of Engineering, Chennai has successfully  
completed an Internship from 05/07/2023 TO 29/07/2023. During this period  
his character and conduct was good.



For THERMODYN EDUTECH

   
Director

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**Chennai-603 103.**



# THERMODYN EDUTECH

Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.MOHAMED VASIM . G**  
**Reg.No: 311821205031** pursuing Bachelor of Information Technology in  
Mohamed Sathak AJ College of Engineering, Chennai has successfully  
completed an Internship from 05/07/2023 TO 29/07/2023. During this period  
his character and conduct was good.



For THERMODYN EDUTECH

Director

**PRINCIPAL**  
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**34, Rajiv Gandhi Road (OMR), Siruseri, IT Park**  
**Chennai-603 103.**



Training & Placement Services

## Certificate of Completion

FULL STACK - JAVA WITH ANGULAR CERTIFIED  
DEVELOPER

We hereby certify that **SEYED AHAMED IFTHIKAR . MJ (Reg.No 311821205055)** pursuing his/her **BE-IT** 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](mailto:info@zohotechs.com) Phone: +91 85085 85683



# THERMODYN EDUTECH

Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.M.MOHAMMED OWAIZ**  
**Reg.No: 311821105035** pursuing Bachelor of Information Technology in  
Mohamed Sathak AJ College of Engineering, Chennai has successfully  
completed an Internship from 05/07/2023 TO 29/07/2023. During this period  
his character and conduct was good.



For THERMODYN EDUTECH

   
Director

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



# THERMODYN EDUTECH

Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.M.MUGILAN, Reg.No: 311821205037**, pursuing Bachelor of Information Technology in Mohamed Sathak AJ College of Engineering, Chennai has successfully completed an Internship from 05/07/2023 TO 29/07/2023. During this period his character and conduct was good.



For THERMODYN EDUTECH

   
Director

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



Training & Placement Services

## Certificate of Completion

FULL STACK- JAVA WITH ANGULAR CERTIFIED  
DEVELOPER

We hereby certify that **Ashik Ahamed.N (Reg.No 311821205008)** pursuing his/her **BE-IT** 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.

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Training & Placement Services

## Certificate of Completion

FULL STACK-JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **N.Nishad Nazeer (Reg.No 311821205040)** pursuing his/her **BE-IT** 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.**  
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Email: [info@zohotechs.com](mailto:info@zohotechs.com) Phone: +91 85085 85683



# THERMODYN EDUTECH

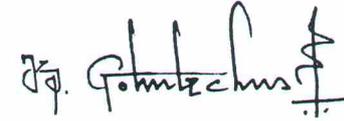
Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.N.SAMSAN**  
**Reg.No: 311821205051** pursuing Bachelor of Information Technology in  
Mohamed Sathak AJ College of Engineering, Chennai has successfully  
completed an Internship from 05/07/2023 TO 29/07/2023. During this period  
his character and conduct was good.



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 **G.Nithya sree (Reg.No 311821205041)** pursuing his/her **BE-IT** 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

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# THERMODYN EDUTECH

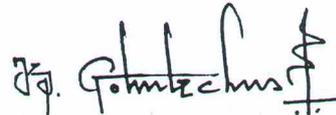
Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.V.PRAJESH RAM Reg.No: 311821205043** pursuing Bachelor of Information Technology in Mohamed Sathak AJ College of Engineering, Chennai has successfully completed an Internship from 05/07/2023 TO 29/07/2023. During this period his character and conduct was good.



For THERMODYN EDUTECH

  
  
Director

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

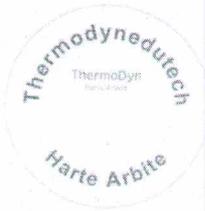


# THERMODYN EDUTECH

Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.RAFIUDEEN**  
**Reg.No: 311821205045** pursuing Bachelor of Information Technology in  
Mohamed Sathak AJ College of Engineering, Chennai has successfully  
completed an Internship from 05/07/2023 TO 29/07/2023. During this period  
his character and conduct was good.



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 **MOHAMED YASIR . S (Reg.No 311821205033)** pursuing his/her **BE-IT** 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

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Email: [info@zohotechs.com](mailto:info@zohotechs.com) Phone: +91 85085 85683



# THERMODYN EDUTECH

Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.S.SHAMEEL AHAMED Reg.No: 311821205056** pursuing Bachelor of Information Technology in Mohamed Sathak AJ College of Engineering, Chennai has successfully completed an Internship from 05/07/2023 TO 29/07/2023. During this period his character and conduct was good.



For THERMODYN EDUTECH

Director

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



Training & Placement Services

## Certificate of Completion

FULL STACK- JAVA WITH ANGULAR CERTIFIED DEVELOPER

We hereby certify that **Muhammad hafiz S.H (Reg.No 311821205038)** pursuing his/her **BE-IT** 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](mailto:info@zohotechs.com) Phone: +91 85085 85683



# THERMODYN EDUTECH

Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.SADHAM HUSSAIN.J**  
**Reg.No: 311821205049** pursuing Bachelor of Information Technology in  
Mohamed Sathak AJ College of Engineering, Chennai has successfully  
completed an Internship from 05/07/2023 TO 29/07/2023. During this period  
his character and conduct was good.



For THERMODYN EDUTECH

   
Director

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



# THERMODYN EDUTECH

Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.SAHANA SERIN.H**  
**Reg.No: 311821205050** pursuing Bachelor of Information Technology in  
Mohamed Sathak AJ College of Engineering, Chennai has successfully  
completed an Internship from 05/07/2023 TO 29/07/2023. During this period  
his character and conduct was good.



For THERMODYN EDUTECH

Director

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



# THERMODYN EDUTECH

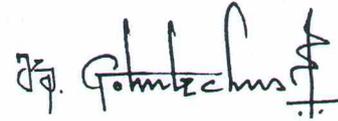
Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.S.SARATH**  
**Reg.No: 311821205053** pursuing Bachelor of Information Technology in  
Mohamed Sathak AJ College of Engineering, Chennai has successfully  
completed an Internship from 05/07/2023 TO 29/07/2023. During this period  
his character and conduct was good.



For THERMODYN EDUTECH

   
Director

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

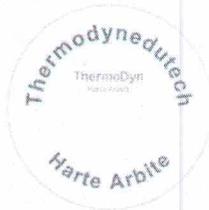


# THERMODYN EDUTECH

Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.SATHISH KUMAR .D**  
**Reg.No: 311821205054** pursuing Bachelor of Information Technology in  
Mohamed Sathak AJ College of Engineering, Chennai has successfully  
completed an Internship from 05/07/2023 TO 29/07/2023. During this period  
his character and conduct was good.



For THERMODYN EDUTECH

Director

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

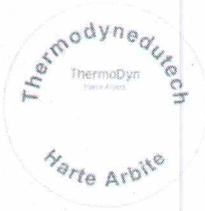


# THERMODYN EDUTECH

Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.SHAHUL HAMED S.N**  
**Reg.No: 311821205304** pursuing Bachelor of Information Technology in  
Mohamed Sathak AJ College of Engineering, Chennai has successfully  
completed an Internship from 05/07/2023 TO 29/07/2023. During this period  
his character and conduct was good.



For THERMODYN EDUTECH

Director

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



# THERMODYN EDUTECH

Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.S.SRI BALAJI Reg.No: 311821205057** pursuing Bachelor of Information Technology in Mohamed Sathak AJ College of Engineering, Chennai has successfully completed an Internship from 05/07/2023 TO 29/07/2023. During this period his character and conduct was good.



For THERMODYN EDUTECH

Director

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

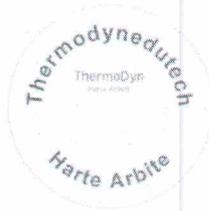


# THERMODYN EDUTECH

Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.S.SRITHAR Reg.No: 311821205058** pursuing Bachelor of Information Technology in Mohamed Sathak AJ College of Engineering, Chennai has successfully completed an Internship from 05/07/2023 TO 29/07/2023. During this period his character and conduct was good.



For THERMODYN EDUTECH

Director

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



# THERMODYN EDUTECH

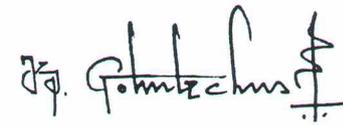
Date: 29.07.2023

## TO WHOM EVER IT MAY CONCERN

This is to certify that **Mr.G.VENGADESAN Reg.No: 311821205060** pursuing Bachelor of Information Technology in Mohamed Sathak AJ College of Engineering, Chennai has successfully completed an Internship from 05/07/2023 TO 29/07/2023. During this period his character and conduct was good.



For THERMODYN EDUTECH

   
Director

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