

AI-Powered Resume Evaluation System: A Review

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Abstract: In the current hiring process, most companies use Applicant Tracking Systems (ATS) to select candidates based on specific keywords and formatting rules. Although these systems are efficient, they often miss qualified individuals whose resumes are not perfectly formatted, creating a challenge for many job seekers. This paper introduces an intelligent framework that uses a Large Language Model (LLM), specifically Mistral-7B-Instruct-v0.2, to improve the job application and career development process. The system is built on four main functions: (1) extracting structured data from PDF resumes, (2) assessing ATS compatibility using a deep understanding of job descriptions, (3) identifying trending skills based on a candidate's career goals, and (4) recommending relevant industry certifications to enhance their professional profiles. The case study results show that the LLM-based system provides more personalized, insightful, and effective feedback compared to traditional ATS systems. This research demonstrates how artificial intelligence can make career advisory services more accessible, providing data-driven guidance that helps job seekers navigate the competitive job market with more confidence and success.

Keywords: Large Language Models (LLMs), Mistral-7B, Resume Parsing, Applicant Tracking System (ATS), Prompt Engineering, Hugging Face API, Career Enhancement, Natural Language Understanding (NLU)

I. INTRODUCTION

The current job market is highly competitive and flooded with applications, prompting businesses to adopt automated tools to manage hiring. Applicant Tracking Systems (ATS) are now widely used, acting as the initial gatekeepers for most corporate job openings. These systems are effective for hiring managers but can be a major hurdle for job seekers. The challenge with traditional ATS lies in their heavy reliance on rigid, keyword-centric algorithms, which often fail to interpret the deeper meaning or value of a candidate's experience. This leads to a "semantic gap" where skilled individuals are unfairly excluded simply because their resumes are not carefully designed for machine interpretation. In response to these limitations, Natural Language Processing (NLP) has evolved significantly with the development of transformer-based Large Language Models (LLMs). Unlike earlier models that struggled with the varied formats and language complexity of resumes, modern LLMs deliver a deeper understanding of context, meaning, and reasoning. This advancement offers a new opportunity to improve resume evaluation, replacing basic keyword matching with a more comprehensive, skills-based, and context-aware approach. By utilizing these models, it is now possible to create tools that not only extract information accurately but also offer the kind of insightful feedback that is typically provided by human career advisors. This paper introduces the AI-Powered Resume Evaluation System, a framework designed to address the challenges of the modern job market. The system goes beyond simple data extraction to offer a range of analytical tools aimed at supporting job seekers. It functions through four key areas: accurately parsing resumes into structured data, performing a deep semantic analysis to assess ATS compatibility with actionable feedback, identifying emerging, in-demand skills relevant to the user's career path, and recommending valuable industry certifications to enhance their professional standing. This integrated approach transforms a resume from a static document into a dynamic tool for strategic career development.



II. LITERATURE REVIEW

Jha et al. (2025) introduced an AI-Powered Resume Builder that integrates intelligent algorithms to improve job application quality and personalize resumes according to industry standards. Their system leveraged machine learning to analyze user profiles, optimize content, and provide real-time recommendations, ultimately improving candidate visibility during recruitment.

Abhishek et al. (2025) developed an intelligent resume screening tool featuring AI-driven analysis and recommendation functions. Their work focused on enhancing the efficiency of hiring by automating the evaluation process through deep learning and NLP-based ranking models, significantly reducing human bias and screening time.

Bevara et al. (2025) proposed Resume2Vec, a model that applies representing resumes and job descriptions in a common vector space, the system achieved more accurate alignment between candidate profiles and employer requirements.

Deshmukh and Raut (2025) implemented a BERT-based NLP framework for automated resume screening and candidate ranking. Their research demonstrated the effectiveness of transformer-based models in understanding contextual semantics within resumes, leading to improved ranking accuracy and reduced manual screening efforts.

Giri (2025) explored AI-powered assessment systems for student evaluation, highlighting how AI can transform traditional evaluation and career readiness processes. Though focused on education, this research connects closely to resume analysis through skill-based profiling and AI-driven recommendation mechanisms.

Mujtaba and Mahapatra (2024) analyzed the ethical and fairness challenges in AI-driven recruitment. Their study emphasized transparency, bias mitigation, and fairness metrics, proposing frameworks to ensure that AI recruitment systems remain unbiased and ethically compliant.

Koshti et al. (2024) presented an AI-Powered Interview Preparation System integrating resume analysis, HR simulation, and technical skill assessment. Their model aimed to holistically enhance a candidate's readiness for interviews, bridging the gap between automated resume screening and personalized interview preparation.

Sarveshwaran et al. (2024) developed an NLP-based AI-driven resume screening system, which used natural language processing techniques to extract key candidate information and rank resumes according to job relevance. The study showcased the efficiency of NLP models in automating the initial stages of recruitment.

Ashrafi et al. (2023) introduced an efficient resume-based re-education system for career recommendations in evolving job markets. Using AI models, the system suggested skill development paths based on resume analysis, helping professionals stay relevant in dynamic industries.

Albassam (2023) conducted a comprehensive analytical review of AI-based recruitment strategies, highlighting the global adoption of AI tools in talent acquisition. The study identified current advancements, challenges, and future directions in AI-driven hiring, forming a foundation for ongoing innovation.

Hunkenschroer and Luetge (2022) explored the ethics of AI-enabled recruiting and selection. Their research addressed ethical dilemmas, including data privacy, algorithmic bias, and transparency in automated decision-making. They proposed a structured research agenda to guide responsible AI adoption in recruitment systems.

2.1 Overview and scope

Research on AI-driven resume analysis and recruitment has grown rapidly in recent years. Early work focused on ethics and governance (Hunkenschroer & Luetge, 2022), while later studies shifted toward practical systems that replace or enhance traditional keyword-based ATS with semantic, machine learning (ML), and deep learning (DL), and LLM-based methods. Two major trends are emerging: (a) employer-side automation for faster and more accurate screening (ranking, embeddings, neural ranking), and (b) candidate-facing tools (resume builders, skill-gap recommendations, interview preparation). Reviews and empirical studies consistently highlight gains in efficiency but also frequently raise concerns about bias, transparency, and real-world validation.

2.2 Datasets and feature engineering

Studies use a mix of structured and unstructured resume inputs and job descriptions. Common inputs and derived features include parsed resume sections (education, experience, skills), extracted entities (job titles, tools,



certifications), lexical/semantic features (embeddings or contextual token representations), and similarity scores between resumes and job descriptions. Some works explicitly rely on pre-trained language models or embedding spaces shifting feature engineering from handcrafted features to learned contextual representations. A recurring limitation mentioned in the literature is the lack of large, standardized, labeled datasets for fair benchmarking and cross-study comparisons.

2.3 Methodological trends and algorithms

Classical and gradient methods: Earlier and simpler pipelines still use feature extraction with tree-based models or ranking SVMs for tabularized resume features, as noted in surveys. Embeddings and representation learning: By 2023 embedding-based approaches became central to capturing semantic similarity between resumes and job descriptions. Transformer / LLM-based models: Transformer models (BERT-family and other LLMs) are used for contextual understanding, named-entity extraction, semantic matching, and refining resume content (Deshmukh & Raut, 2025; Jha et al., 2025). Neural ranking / learning-to-rank: Deep neural ranking architectures treat matching as a document ranking problem and outperform keyword-based heuristics (Rezaeipourfarsangi & Milios, 2023). Overall trend: transition from keyword matching embedding/transformer semantics integrated LLM pipelines that both evaluate and generate recommendations for job seekers.

2.4 Resume matching, ranking, and embedding approaches

Resume matching, ranking, and embedding approaches Two complementary approaches are apparent: (a) representation similarity (embedding both the job description and resume into a common space and then computing similarity; and (b) learning-to-rank (neural ranking models that score resume-job pairs directly, 2023). Embedding approaches improve robustness to variations in vocabulary and synonyms (addressing the brittleness of ATS keyword-based searches). Ranking approaches optimize the order of candidates for a given role and can incorporate insights from past hiring trends. Both approaches outperform keyword-only systems in experiments detailed in studies from.

2.5 Candidate-centered systems: builders, feedback, and preparation

Recent studies from 2024 to 2025 have moved beyond employer-side screening to include support for job seekers: AI-based tools that rewrite resumes to pass automated systems while still being clear to recruiters systems that identify missing skills and suggest courses for improvement and platforms that connect resume analysis with mock interviews and technical tests. These studies focus on a cycle of help: analyze, advise, and practice. They highlight that clear explanations and practical advice (like why a change helps) are not widely available but are crucial for users.

2.6 Integration with ATS, HR workflows, and deployments

Research outlines two ways these systems can be integrated: (1) replacing or improving existing employer applicant tracking systems using semantic scoring and ranking models, and (2) tools that help job seekers adjust their resumes before they are sent to third-party systems. Many studies mention practical challenges, such as making sure these tools work with real ATS systems, dealing with different ways employers classify skills and job titles, and testing recommendations using real ATS behavior instead of just internal data. Most research reports results from offline or simulated environments, with few studies showing real-world success.

2.7 Metrics for measuring success and checking validity

Commonly used metrics include ranking and information retrieval scores (like precision@k, MAP), classification accuracy (such as accuracy, ROC/AUC for predicting hiring decisions), and standard NLP performance measures (like F1, precision, and recall). Some studies also measure outcomes like better job matches or more interview opportunities in small tests. However, the field cautions against overestimating results due to limited and inconsistent datasets, and the lack of testing across different ATS systems. Techniques like cross-validation and time-based testing are suggested but not always followed.



2.8 Challenges, ethical issues, and areas needing more research

The literature points out several key issues:

Limited data and standardization: There is no widely accepted large dataset to test systems that match resumes to job postings. **Generalization problems:** Models often struggle when applied to new companies or industries due to differences in vocabulary and job descriptions. **Clarity for job seekers:** Most explanations focus on employers or auditors, but candidates need simple, helpful insights. **Real-world testing:** Few studies check the effects of resume changes by actually submitting them to real ATS systems to see how they affect hiring decisions. **Bias and fairness:** Research shows AI can unintentionally favor certain groups; reducing bias and ensuring transparency are urgent priorities. **Long-term impact:** There is not enough long-term research on whether support for job seekers leads to better hiring results or career benefits.

2.9 Synopsis

From 2022 to 2025, the field has moved quickly from ethical concerns and criticism (2022) to the use of semantic, embedding, and transformer-based solutions, alongside new tools that help job seekers. This body of work shows clear advancement over older keyword-based systems: better matching, more accurate rankings, and more support for candidates (like resume improvements, training suggestions, and interview prep). However, important issues remain, such as standardized datasets, real-world testing of ATS compatibility, explainable results for job seekers, and fairness checks. These are areas where a system powered by an LLM and focused on candidates could make the biggest difference: offering clear, tested support that helps job seekers and supports ethical hiring practices.

III. PROPOSED METHODOLOGY

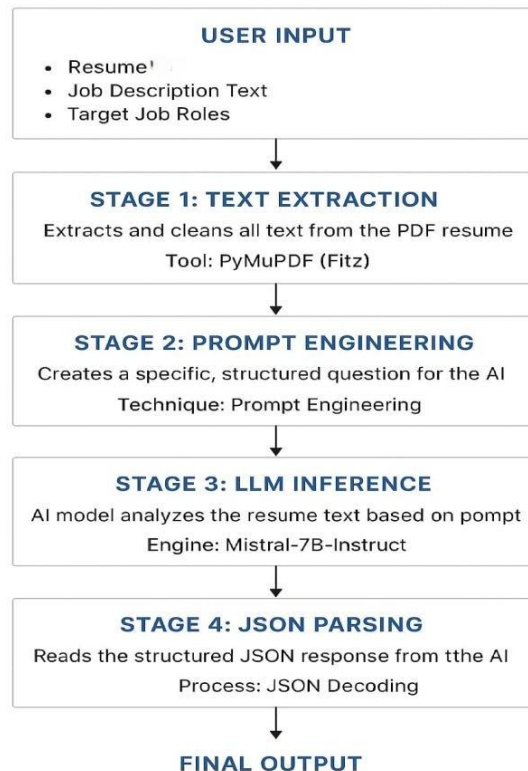


Fig: AI-Powered Resume Evaluation System



1. PDF Text Extraction and Normalization:

The process starts by using a program to get the user's PDF resume. The system uses the PyMuPDF library to open the file, go through each page, and take out all the text. This raw text is then combined and goes through a normalization step where extra spaces, line breaks, and other formatting issues are removed. This helps the AI model get a clean and standard block of text, which makes the analysis more accurate.

2. Dynamic Prompt Engineering:

This key step involves making clear and specific instructions for the AI. This is called prompt engineering. For every task, a unique prompt is created to tell the AI what to do and how to respond. The prompt includes the cleaned resume text and also shows the required JSON format for the output. This approach makes sure the AI's response is both accurate and structured as needed.

3. LLM Inference via API:

Once the prompt is ready, it is sent to the Mistral-7B-Instruct-v0.2 model through the Hugging Face Inference API. The model, which is on a remote server, does the main processing. It uses its knowledge of language to analyze the resume based on the instructions. It completes the required tasks such as data extraction, comparison, or recommendations and gives a response in the form of a JSON object, which is then sent back to the application.

4. JSON Parsing and Data Presentation:

The last step involves receiving the JSON response from the API. The system then converts this text into a structured Python dictionary using a reliable parsing method. This structured data contains important information like the ATS score, feedback, and skill recommendations. The data is then clearly shown to the user, completing the entire process from an unorganized resume to useful insights.

IV. CONCLUSION

In summary, this paper introduces the AI-Powered Resume Evaluation System, a framework aimed at tackling the challenges job seekers face in a recruitment environment dominated by Applicant Tracking Systems. We have outlined a four-stage method that begins with extracting text from PDF resumes, moves to advanced prompt engineering, then uses the Mistral-7B-Instruct-v0.2 model for inference, and finally processes the structured JSON output. This system shows that modern LLMs can go beyond traditional resume screening methods by utilizing their advanced understanding of natural language. The main contribution of this work is its integrated, multi-functional approach. The system doesn't just parse data; it also serves as a personal career advisor by giving an ATS compatibility score, helpful feedback, recommendations for trending skills, and suggestions for industry certifications. This proves that even moderately-sized LLMs can be used to create powerful tools that give users strategic insights. The results show that a well-designed system can effectively connect a candidate's current profile with the changing demands of the job market. Although the framework shows a lot of promise, there are some limitations. These include its reliance on the LLM training data cutoff and the risk of AI hallucinations. Future work can explore different paths to improve the system. Fine-tuning a custom model on a carefully selected resume and job description dataset might also help to improve accuracy. Additionally, connecting the system to live job board APIs could allow for real-time analysis against current job opportunities. In the end, the AI-Powered Resume Evaluation System acts as a strong proof-of-concept for the next generation of career development tools. It offers a scalable, intelligent, and user-friendly solution that makes career guidance more accessible. This framework helps job seekers gain a competitive advantage by transforming their static resume into a source of dynamic, data-driven advice, allowing them to navigate their professional paths with more confidence and success.



REFERENCES

1. Jha, R., Paliwal, G., & Jha, B. K. (2025). AI-Powered Resume Builder: Enhancing Job Applications with Artificial Intelligence. 3rd International Conference on Disruptive Technologies (ICDT), IEEE.
2. Abhishek, K. L., Niranjanamurthy, M., Aric, S., Ansarullah, S. I., Sinha, A., Tejani, G., & Shah, M. A. (2025). Developing an Intelligent Resume Screening Tool With AI - Driven Analysis and Recommendation Features. *Applied AI Letters*, 6(2), e116.
3. Bevara, R. V. K., Mannuru, N. R., Karedla, S. P., Lund, B., Xiao, T., Pasem, H., & Rupeshkumar, S. (2025). Resume2Vec: Transforming Applicant Tracking Systems with Intelligent Resume Embeddings for Precise Candidate Matching. *Electronics*, 14(4), 794.
4. Giri, A. (2025). Revolutionizing Student Evaluation: The Power of AI-Powered Assessment. In *Improving Student Assessment with Emerging AI Tools* (pp. 333–362). IGI Global.
5. Deshmukh, A., & Raut, A. (2025). Applying BERT-Based NLP for Automated Resume Screening and Candidate Ranking. *Annals of Data Science*, 12(2), 591–603.
6. Mujtaba, D. F., & Mahapatra, N. R. (2024). Fairness in AI-Driven Recruitment: Challenges, Metrics, Methods, and Future Directions. *arXiv preprint arXiv:2405.19699*.
7. Koshti, H., Gosavi, P., Pagar, R., Khairnar, P., & Talekar, S. (2024). AI-Powered Interview Preparation System: Integrating Resume Analysis, HR Simulation, and Technical Skill Assessment. *HR Simulation and Technical Skill Assessment*.
8. Sarveshwaran, R., Karthikeyan, S., Cruz, M. V., Shreyanth, S., Niveditha, S., & Rajesh, P. K. (2024, August). NLP-Based AI-Driven Resume Screening. In *Proceedings of Ninth International Congress on Information and Communication Technology (ICICT 2024)* (Vol. 1012, p. 359). Springer Nature.
9. Ashrafi, S., Majidi, B., Akhtarkavan, E., & Hajiagha, S. H. R. (2023). Efficient Resume- Based Re-Education for Career Recommendation in Rapidly Evolving Job Markets. *IEEE Access*, 11, 124350–124367.
10. Albassam, W. A. (2023). The Power of Artificial Intelligence in Recruitment: An Analytical Review of Current AI-Based Recruitment Strategies. *International Journal of Professional Business Review*, 8(6), 4.
11. Hunkenschroer, A. L., & Luetge, C. (2022). Ethics of AI-Enabled Recruiting and Selection: A Review and Research Agenda. *Journal of Business Ethics*, 178(4), 977– 1007.
12. Godase, M. V., Mulani, A., Ghodak, M. R., Birajadar, M. G., Takale, M. S., & Kolte, M. A. MapReduce and Kalman Filter based Secure IIoT Environment in Hadoop. *Sanshodhak*, Volume 19, June 2024.
13. Mulani, A. O., & Mane, P. B. (2017). Watermarking and cryptography based image authentication on reconfigurable platform. *Bulletin of Electrical Engineering and Informatics*, 6(2), 181-187.
14. Gadade, B., Mulani, A. O., & Harale, A. D. IoT Based Smart School Bus and Student Tracking System. *Sanshodhak*, Volume 19, June 2024.
15. Dhanawadel, A., Mulani, A. O., & Pise, A. C. IOT based Smart farming using Agri BOT. *Sanshodhak*, Volume 20, June 2024.
16. Mulani, A., & Mane, P. B. (2016). DWT based robust invisible watermarking. *Scholars' Press*.
17. R. G. Ghodke, G. B. Birajdar, A.O. Mulani, G.N. Shinde, R.B. Pawar, Design and Development of an Efficient and Cost-Effective surveillance Quadcopter using Arduino, *Sanshodhak*, Volume 20, June 2024.
18. R. G. Ghodke, G. B. Birajdar, A.O. Mulani, G.N. Shinde, R.B. Pawar, Design and Development of Wireless Controlled ROBOT using Bluetooth Technology, *Sanshodhak*, Volume 20, June 2024.
19. Swami, S. S., & Mulani, A. O. (2017, August). An efficient FPGA implementation of discrete wavelet transform for image compression. In *2017 International Conference on Energy, Communication, Data Analytics and Soft Computing (ICECDS)* (pp. 3385-3389). IEEE.
20. Mane, P. B., & Mulani, A. O. (2018). High speed area efficient FPGA implementation of AES algorithm. *International Journal of Reconfigurable and Embedded Systems*, 7(3), 157-165.
21. Mulani, A. O., & Mane, P. B. (2016). Area efficient high speed FPGA based invisible watermarking for image authentication. *Indian journal of Science and Technology*, 9(39), 1-6.



22. Kashid, M. M., Karande, K. J., & Mulani, A. O. (2022, November). IoT-based environmental parameter monitoring using machine learning approach. In Proceedings of the International Conference on Cognitive and Intelligent Computing: ICCIC 2021, Volume 1 (pp. 43-51). Singapore: Springer Nature Singapore.
23. Nagane, U. P., & Mulani, A. O. (2021). Moving object detection and tracking using Matlab. Journal of Science and Technology, 6(1), 2456-5660.
24. Kulkarni, P. R., Mulani, A. O., & Mane, P. B. (2016). Robust invisible watermarking for image authentication. In Emerging Trends in Electrical, Communications and Information Technologies: Proceedings of ICECIT-2015 (pp. 193-200). Singapore: Springer Singapore.
25. Ghodake, M. R. G., & Mulani, M. A. (2016). Sensor based automatic drip irrigation system. Journal for Research, 2(02).
26. Mandwale, A. J., & Mulani, A. O. (2015, January). Different Approaches For Implementation of Viterbi decoder on reconfigurable platform. In 2015 International Conference on Pervasive Computing (ICPC) (pp. 1-4). IEEE.
27. Jadhav, M. M., Chavan, G. H., & Mulani, A. O. (2021). Machine learning based autonomous fire combat turret. Turkish Journal of Computer and Mathematics Education, 12(2), 2372-2381.
28. Shinde, G., & Mulani, A. (2019). A robust digital image watermarking using DWT-PCA. International Journal of Innovations in Engineering Research and Technology, 6(4), 1-7.
29. Mane, D. P., & Mulani, A. O. (2019). High throughput and area efficient FPGA implementation of AES algorithm. International Journal of Engineering and Advanced Technology, 8(4).
30. Mulani, A. O., & Mane, D. P. (2017). An Efficient implementation of DWT for image compression on reconfigurable platform. International Journal of Control Theory and Applications, 10(15), 1-7.
31. Deshpande, H. S., Karande, K. J., & Mulani, A. O. (2015, April). Area optimized implementation of AES algorithm on FPGA. In 2015 International Conference on Communications and Signal Processing (ICCSP) (pp. 0010-0014). IEEE.
32. Deshpande, H. S., Karande, K. J., & Mulani, A. O. (2014, April). Efficient implementation of AES algorithm on FPGA. In 2014 International Conference on Communication and Signal Processing (pp. 1895-1899). IEEE.
33. Kulkarni, P., & Mulani, A. O. (2015). Robust invisible digital image watermarking using discrete wavelet transform. International Journal of Engineering Research & Technology (IJERT), 4(01), 139-141.
34. Mulani, A. O., Jadhav, M. M., & Seth, M. (2022). Painless Non - invasive blood glucose concentration level estimation using PCA and machine learning. The CRC Book entitled Artificial Intelligence, Internet of Things (IoT) and Smart Materials for Energy Applications.
35. Mulani, A. O., & Shinde, G. N. (2021). An approach for robust digital image watermarking using DWT - PCA. Journal of Science and Technology, 6(1).
36. Mulani, A. O., & Mane, P. B. (2014, October). Area optimization of cryptographic algorithm on less dense reconfigurable platform. In 2014 International Conference on Smart Structures and Systems (ICSSS) (pp. 86-89). IEEE.
37. Jadhav, H. M., Mulani, A., & Jadhav, M. M. (2022). Design and development of chatbot based on reinforcement learning. Machine Learning Algorithms for Signal and Image Processing, 219-229.
38. Mulani, A. O., & Mane, P. (2018). Secure and area efficient implementation of digital image watermarking on reconfigurable platform. International Journal of Innovative Technology and Exploring Engineering, 8(2), 56-61.
39. Kalyankar, P. A., Mulani, A. O., Thigale, S. P., Chavhan, P. G., & Jadhav, M. M. (2022). Scalable face image retrieval using AESC technique. Journal Of Algebraic Statistics, 13(3), 173-176.
40. Takale, S., & Mulani, A. (2022). DWT-PCA based video watermarking. Journal of Electronics, Computer Networking and Applied Mathematics (JECNAM) ISSN, 2799-1156.
41. Kamble, A., & Mulani, A. O. (2022). Google assistant based device control. Int. J. of Aquatic Science, 13(1), 550-555.
42. Kondekar, R. P., & Mulani, A. O. (2017). Raspberry Pi based voice operated Robot. International Journal of Recent Engineering Research and Development, 2(12), 69-76.



43. Ghodake, R. G., & Mulani, A. O. (2018). Microcontroller based automatic drip irrigation system. In Techno-Societal 2016: Proceedings of the International Conference on Advanced Technologies for Societal Applications (pp. 109-115). Springer International Publishing.
44. Mulani, A. O., Birajadar, G., Ivković, N., Salah, B., & Darlis, A. R. (2023). Deep learning based detection of dermatological diseases using convolutional neural networks and decision trees. *Traitement du Signal*, 40(6), 2819.
45. Boxey, A., Jadhav, A., Gade, P., Ghanti, P., & Mulani, A. O. (2022). Face Recognition using Raspberry Pi. *Journal of Image Processing and Intelligent Remote Sensing (JIPIRS)* ISSN, 2815-0953.
46. Patale, J. P., Jagadale, A. B., Mulani, A. O., & Pise, A. (2023). A Systematic survey on Estimation of Electrical Vehicle. *Journal of Electronics, Computer Networking and Applied Mathematics (JECNAM)* ISSN, 2799-1156.
47. Gadade, B., & Mulani, A. (2022). Automatic System for Car Health Monitoring. *International Journal of Innovations in Engineering Research and Technology*, 57-62.
48. Shinde, M. R. S., & Mulani, A. O. (2015). Analysis of Biomedical Image Using Wavelet Transform. *International Journal of Innovations in Engineering Research and Technology*, 2(7), 1-7.
49. Mandwale, A., & Mulani, A. O. (2014, December). Implementation of convolutional encoder & different approaches for viterbi decoder. In *IEEE International Conference on Communications, Signal Processing Computing and Information technologies*.
50. Mulani, A. O., Jadhav, M. M., & Seth, M. (2022). Painless machine learning approach to estimate blood glucose level with non-invasive devices. In *Artificial intelligence, internet of things (IoT) and smart materials for energy applications* (pp. 83-100). CRC Press.
51. Maske, Y., Jagadale, A. B., Mulani, A. O., & Pise, A. C. (2023). Development of BIOBOT system to assist COVID patient and caretakers. *European Journal of Molecular & Clinical Medicine*, 10(01), 2023.
52. Utpat, V. B., Karande, D. K., & Mulani, D. A. Grading of Pomegranate Using Quality Analysis || . *International Journal for Research in Applied Science & Engineering Technology (IJRASET)*, 10.
53. Takale, S., & Mulani, D. A. (2022). Video Watermarking System. *International Journal for Research in Applied Science & Engineering Technology (IJRASET)*, 10.
54. Mandwale, A., & Mulani, A. O. (2015, January). Different approaches for implementation of Viterbi decoder. In *IEEE international conference on pervasive computing (ICPC)*.
55. Maske, Y., Jagadale, M. A., Mulani, A. O., & Pise, A. (2021). Implementation of BIOBOT System for COVID Patient and Caretakers Assistant Using IOT. *International Journal of Information Technology and*, 30-43.
56. Mulani, A. O., & Mane, D. P. (2016). Fast and Efficient VLSI Implementation of DWT for Image Compression. *International Journal for Research in Applied Science & Engineering Technology*, 5, 1397-1402.
57. Kambale, A. (2023). Home automation using google assistant. *UGC care approved journal*, 32(1), 1071-1077.
58. Pathan, A. N., Shejal, S. A., Salgar, S. A., Harale, A. D., & Mulani, A. O. (2022). Hand gesture controlled robotic system. *Int. J. of Aquatic Science*, 13(1), 487-493.
59. Korake, D. M., & Mulani, A. O. (2016). Design of Computer/Laptop Independent Data transfer system from one USB flash drive to another using ARM11 processor. *International Journal of Science, Engineering and Technology Research*.
60. Mandwale, A., & Mulani, A. O. (2016). Implementation of High Speed Viterbi Decoder using FPGA. *International Journal of Engineering Research & Technology, IJERT*.
61. Kolekar, S. D., Walekar, V. B., Patil, P. S., Mulani, A. O., & Harale, A. D. (2022). Password Based Door Lock System. *Int. J. of Aquatic Science*, 13(1), 494-501.
62. Shinde, R., & Mulani, A. O. (2015). Analysis of Biomedical Image || . *International Journal on Recent & Innovative trend in technology (IJRITT)*.
63. Sawant, R. A., & Mulani, A. O. (2022). Automatic PCB Track Design Machine. *International Journal of Innovative Science and Research Technology*, 7(9).



64. ABHANGRAO, M. R., JADHAV, M. S., GHODKE, M. P., & MULANI, A. (2017). Design And Implementation Of 8-bit Vedic Multiplier. International Journal of Research Publications in Engineering and Technology (ISSN No: 2454-7875).
65. Gadade, B., Mulani, A. O., & Harale, A. D. (2024). Iot based smart school bus and student monitoring system. Naturalista Campano, 28(1), 730-737.
66. Mulani, D. A. O. (2024). A Comprehensive Survey on Semi-Automatic Solar-Powered Pesticide Sprayers for Farming. Journal of Energy Engineering and Thermodynamics (JEET) ISSN, 2815-0945.
67. Salunkhe, D. S. S., & Mulani, D. A. O. (2024). Solar Mount Design Using High-Density Polyethylene. NATURALISTA CAMPANO, 28(1).
68. Seth, M. (2022). Painless Machine learning approach to estimate blood glucose level of Non-Invasive device. Artificial Intelligence, Internet of Things (IoT) and Smart Materials for Energy Applications.
69. Kolhe, V. A., Pawar, S. Y., Gohery, S., Mulani, A. O., Sundari, M. S., Kiradoo, G., ... & Sunil, J. (2024). Computational and experimental analyses of pressure drop in curved tube structural sections of Coriolis mass flow metre for laminar flow region. Ships and Offshore Structures, 19(11), 1974-1983.
70. Basawaraj Birajadar, G., Osman Mulani, A., Ibrahim Khalaf, O., Farhah, N., G Gawande, P., Kinage, K., & Abdullah Hamad, A. (2024). Epilepsy identification using hybrid CoPro-DCNN classifier. International Journal of Computing and Digital Systems, 16(1), 783-796.
71. Kedar, M. S., & Mulani, A. (2021). IoT Based Soil, Water and Air Quality Monitoring System for Pomegranate Farming. Journal of Electronics, Computer Networking and Applied Mathematics (JECNAM) ISSN, 2799-1156.
72. Godse, A. P. A.O. Mulani (2009). Embedded Systems (First Edition).
73. Pol, R. S., Bhalerao, M. V., & Mulani, A. O. A real time IoT based System Prediction and Monitoring of Landslides. International Journal of Food and Nutritional Sciences, Volume 11, Issue 7, 2022.
74. Mulani, A. O., Sardey, M. P., Kinage, K., Salunkhe, S. S., Fegade, T., & Fegade, P. G. (2025). ML-powered Internet of Medical Things (MLIOMT) structure for heart disease prediction. Journal of Pharmacology and Pharmacotherapeutics, 16(1), 38-45.
75. Aiwale, S., Kolte, M. T., Harpale, V., Bendre, V., Khurge, D., Bhandari, S., ... & Mulani, A. O. (2024). Non-invasive Anemia Detection and Prediagnosis. Journal of Pharmacology and Pharmacotherapeutics, 15(4), 408-416.
76. Mulani, A. O., Bang, A. V., Birajadar, G. B., Deshmukh, A. B., Jadhav, H. M., & Liyakat, K. K. S. (2024). IoT Based Air, Water, and Soil Monitoring System for Pomegranate Farming. Annals of Agri-Bio Research, 29(2), 71-86.
77. Kulkarni, T. M., & Mulani, A. O. (2024). Face Mask Detection on Real Time Images and Videos using Deep Learning. International Journal of Electrical Machine Analysis and Design (IJEMAD), 2(1).
78. Thigale, S. P., Jadhav, H. M., Mulani, A. O., Birajadar, G. B., Nagrale, M., & Sardey, M. P. (2024). Internet of things and robotics in transforming healthcare services. Afr J Biol Sci (S Afr), 6(6), 1567-1575.
79. Pol, D. R. S. (2021). Cloud Based Memory Efficient Biometric Attendance System Using Face Recognition. Stochastic Modeling & Applications, 25(2).
80. Nagtilak, M. A. G., Ulegaddi, M. S. N., Adat, M. A. S., & Mulani, A. O. (2021). Breast Cancer Prediction using Machine Learning.
81. Rahul, G. G., & Mulani, A. O. (2016). Microcontroller Based Drip Irrigation System.
82. Kulkarni, T. M., & Mulani, A. O. Deep Learning Based Face-Mask Detection: An Approach to Reduce Pandemic Spreads in Human Healthcare. African Journal of Biological Sciences, 6(6), 2024.
83. Mulani, A., & Mane, P. B. (2016). DWT based robust invisible watermarking. Scholars' Press.
84. Dr. Vaishali Satish Jadhav, Dr. Shweta Sadanand Salunkhe, Dr. Geeta Salunkhe, Pranali Rajesh Yawle, Dr. Rahul S. Pol, Dr. Altaf Osman Mulani, Dr. Manish Rana, Iot Based Health Monitoring System for Human, Afr. J. Biomed. Res. Vol. 27 (September 2024).
85. Dr. Vaishali Satish Jadhav, Geeta D. Salunke, Kalyani Ramesh Chaudhari, Dr. Altaf Osman Mulani, Dr. Sampada Padmakar Thigale, Dr. Rahul S. Pol, Dr. Manish Rana, Deep Learning-Based Face Mask Recognition in Real-Time Photos and Videos, Afr. J. Biomed. Res. Vol. 27 (September 2024).



86. Altaf Osman Mulani, Electric Vehicle Parameters Estimation Using Web Portal, Recent Trends in Electronics & Communication Systems, Volume 10, Issue 3, 2023.
87. Aryan Ganesh Nagtilak, Sneha Nitin Ulegaddi, Mahesh Mane, Altaf O. Mulani, Automatic Solar Powered Pesticide Sprayer for Farming, International Journal of Microwave Engineering and Technology, Volume 9 No. 2, 2023.
88. Annasaheb S. Dandage, Vitthal R. Rupnar, Tejas A Pise, and A. O. Mulani, Real-Time Language Translation Application Using Tkinter. International Journal of Digital Communication and Analog Signals. 2025; 11(01): -p.
89. AnnaSaheb S Dandage, Vitthal R. Rupnar, Tejas A Pise, and A. O. Mulani, IoT-Powered Weather Monitoring and Irrigation Automation: Transforming Modern Farming Practices. . 2025; 11(01): -p.
90. Mulani, A.O., Kulkarni, T.M. (2025). Face Mask Detection System Using Deep Learning: A Comprehensive Survey. In: Singh, S., Arya, K.V., Rodriguez, C.R., Mulani, A.O. (eds) Emerging Trends in Artificial Intelligence, Data Science and Signal Processing. AIDSP 2023. Communications in Computer and Information Science, vol 2439. Springer, Cham. https://doi.org/10.1007/978-3-031-88759-8_3.
91. Karve, S., Gangonda, S., Birajadar, G., Godase, V., Ghodake, R., Mulani, A.O. (2025). Optimized Neural Network for Prediction of Neurological Disorders. In: Singh, S., Arya, K.V., Rodriguez, C.R., Mulani, A.O. (eds) Emerging Trends in Artificial Intelligence, Data Science and Signal Processing. AIDSP 2023. Communications in Computer and Information Science, vol 2440. Springer, Cham. https://doi.org/10.1007/978-3-031-88762-8_18.
92. Saurabh Singh, Karm Veer Arya, Ciro Rodriguez Rodriguez, and Altaf Osman Mulani, Emerging Trends in Artificial Intelligence, Data Science and Signal Processing, Communications in Computer and Information Science (CCIS), volume 2440.
93. Saurabh Singh, Karm Veer Arya, Ciro Rodriguez Rodriguez, and Altaf Osman Mulani, Emerging Trends in Artificial Intelligence, Data Science and Signal Processing, Communications in Computer and Information Science (CCIS), volume 2439.
94. Godase, V., Mulani, A., Pawar, A., & Sahani, K. (2025). A Comprehensive Review on PIR Sensor-Based Light Automation Systems. International Journal of Image Processing and Smart Sensors, 1(1), 22-29.
95. Godase, V., Mulani, A., Takale, S., & Ghodake, R. (2025). Comprehensive Review on Automated Field Irrigation using Soil Image Analysis and IoT. Journal of Advance Electrical Engineering and Devices, 3(1), 46-55.
96. Altaf Osman Mulani, Deshmukh M., Jadhav V., Chaudhari K., Mathew A.A., Shweta Salunkhe. Transforming Drug Therapy with Deep Learning: The Future of Personalized Medicine. Drug Research. 2025 Aug 29.
97. Altaf O. Mulani, Vaibhav V. Godase, Swapnil R. Takale, Rahul G. Ghodake (2025), Image Authentication Using Cryptography and Watermarking, International Journal of Image Processing and Smart Sensors, Vol. 1, Issue 2, pp 27-34.
98. Altaf O. Mulani, Vaibhav V. Godase, Swapnil R. Takale, Rahul G. Ghodake (2025), Advancements in Artificial Intelligence: Transforming Industries and Society, International Journal of Artificial Intelligence of Things (AIoT) in Communication Industry, Vol. 1, Issue 2, pp 1-5.
99. Altaf O. Mulani, Vaibhav V. Godase, Swapnil R. Takale, Rahul G. Ghodake (2025), AI-Powered Predictive Analytics in Healthcare: Revolutionizing Disease Diagnosis and Treatment, Journal of Advance Electrical Engineering and Devices, Vol. 3, Issue 2, pp 27-34.
100. Godase, V., Mulani, A., Takale, S., & Ghodake, R. (2025). A Holistic Review of Automatic Drip Irrigation Systems: Foundations and Emerging Trends. Available at SSRN 5247778.
101. V. Godase, R. Ghodake, S. Takale, and A. Mulani, —Design and Optimization of Reconfigurable Microwave Filters Using AI Techniques, International Journal of RF and Microwave Communication Technologies, vol. 2, no. 2, pp.26–41, Aug. 2025.
102. V. Godase, A. Mulani, R. Ghodake, S. Takale, “Automated Water Distribution Management and Leakage Mitigation Using PLC Systems,” Journal of Control and Instrumentation Engineering, vol.11, no. 3, pp. 1-8, Aug. 2025.
103. V. Godase, A. Mulani, R. Ghodake, S. Takale, “PLC-Assisted Smart Water Distribution with Rapid Leakage Detection and Isolation,” Journal of Control Systems and Converters, vol. 1, no. 3, pp. 1-13, Aug. 2025.



104. V. V. Godase, S. R. Takale, R. G. Ghodake, and A. Mulani, "Attention Mechanisms in Semantic Segmentation of Remote Sensing Images," *Journal of Advancement in Electronics Signal Processing*, vol. 2, no. 2, pp. 45–58, Aug. 2025.
105. D. Waghmare, A. Mulani, S. R. Takale, V. Godase, and A. Mulani, "A Comprehensive Review on Automatic Fruit Sorting and Grading Techniques with Emphasis on Weight-based Classification," *Research & Review: Electronics and Communication Engineering*, vol. 2, no. 3, pp. 1-10, Oct. 2025.
106. Karande, K. J., & Talbar, S. N. (2014). Independent component analysis of edge information for face recognition. Springer India.
107. Karande, K. J., & Talbar, S. N. (2008). Face recognition under variation of pose and illumination using independent component analysis. ICGST-GVIP, ISSN.
108. Gaikwad, D. S., & Karande, K. J. (2016). Image processing approach for grading and identification of diseases on pomegranate fruit: An overview. *International Journal of Computer Science and Information Technologies*, 7, 519-522.
109. Kawathekar, P. P., & Karande, K. J. (2014, July). Severity analysis of Osteoarthritis of knee joint from X-ray images: A Literature review. In 2014 International Conference on Signal propagation and computer technology (ICSPCT 2014) (pp. 648-652). IEEE.
110. Daithankar, M. V., Karande, K. J., & Harale, A. D. (2014, April). Analysis of skin color models for face detection. In 2014 International Conference on Communication and Signal Processing (pp. 533-537). IEEE.
111. Karande, J. K., Talbar, N. S., & Inamdar, S. S. (2012, May). Face recognition using oriented Laplacian of Gaussian (OLOG) and independent component analysis (ICA). In 2012 Second International Conference on Digital Information and Communication Technology and it's Applications (DICTAP) (pp. 99-103). IEEE.
112. Shubham Salunkhe, Pruthviraj Zambare, Sakshi Shinde, S. K. Godase. (2024). API Development for Cloud Parameter Curation International. *Journal of Electrical and Communication Engineering Technology*, 2(1). <https://doi.org/10.37591/ijecet>
113. Badave, A., Pawale, A., Andhale, T., Godase, S. K., & STM JOURNALS. (2024). Smart home safety using fire and gas detection system. *Recent Trends in Fluid Mechanics*, 1, 35–43. <https://journals.stmjournals.com/rtfm>
114. Asabe, H., Asabe, R., Lengare, O., & Godase, S. (2025). IOT- BASED STORAGE SYSTEM FOR MANAGING VOLATILE MEDICAL RESOURCES IN HEALTHCARE FACILITIES. *INTERNATIONAL JOURNAL OF PROGRESSIVE RESEARCH IN ENGINEERING MANAGEMENT AND SCIENCE (IJPREMS)*, 05(03), 2427–2433. <https://www.ijprems.com>
115. Karche, S. N., Mulani, A. O., Department of Electronics, SKN Sinhgad College of Engineering, Korti, & University of Solapur, Maharashtra, India. (2018). AESC Technique for Scalable Face Image Retrieval. *International Journal of Innovative Research in Computer and Communication Engineering*, 6(4), 3404–3405. <https://doi.org/10.15680/IJIRCE.2018.0604036>
116. Bankar, A. S., Harale, A. D., & Karande, K. J. (2021). Gestures Controlled Home Automation using Deep Learning: A Review. *International Journal of Current Engineering and Technology*, 11(06), 617–621. <https://doi.org/10.14741/ijcet/v.11.6.4>
117. Mali, A. S., Ghadge, S. K., Adat, A. S., & Karande, S. V. (2024). Intelligent Medication Management System. *IJSRD - International Journal for Scientific Research & Development*, Vol. 12(Issue 3).
118. Water Level Control, Monitoring and Altering System by using GSM in Irrigation Based on Season. (2019). In *International Research Journal of Engineering and Technology (IRJET)* (Vol. 06, Issue 04, p. 1035) [Journal-article]. <https://www.irjet.net>
119. Modi, S., Misal, V., Kulkarni, S., & Mali A.S. (2025). Hydroponic Farming Monitoring System - Automated system to monitor and control nutrient and pH levels. In *Journal of Microcontroller Engineering and Applications* (Vol. 12, Issue 3, pp. 11–16). <https://doi.org/10.37591/JoMEA>
120. Siddheshwar S. Gangonda, Prashant P. Patavardhan, Kailash J. Karande, "VGHN: variations aware geometric moments and histogram features normalization for robust uncontrolled face recognition", *International Journal of Information Technology*, <https://doi.org/10.1007/s41870-021-00703-0>.



121. Siddheshwar Gangonda and Prachi Mukherji, "Speech Processing for Marathi Numeral Recognition using MFCC & DTW Features", International Journal of Engineering Research And Applications (IJERA) pp. 118-122, ISSN: 2248-9622.
122. Siddheshwar S. Gangonda, Prashant P. Patavardhan, Kailash J. Karande, "Recognition of Marathi Numerals Using MFCC and DTW Features", Book Title: Recent Trends on Image Processing and Pattern Recognition, RTIP2R 2018, CCIS 1037, pp. 1-11, © Springer Nature Singapore Pte Ltd. 2019 https://doi.org/10.1007/978-981-13-9187-3_17.
123. Siddheshwar S. Gangonda, Prashant P. Patavardhan, Kailash J. Karande, "Analysis of Face Recognition Algorithms for Uncontrolled Environments", Book Title: Computing, Communication and Signal Processing, pp. 919-926, © Springer Nature Singapore Pte Ltd. 2018.
124. Siddheshwar S. Gangonda, Prashant P. Patavardhan, Kailash J. Karande, "Recognition of Marathi Numerals using MFCC and DTW Features", 2nd International Conference on Recent Trends in Image Processing and Pattern Recognition (RTIP2R 2018), 21th -22th Dec., 2018, organized by Solapur University, Solapur in collaboration with University of South Dakota (USA) and Universidade de Evora (Portugal), India.
125. Siddheshwar S. Gangonda, Prashant P. Patavardhan, Kailash J. Karande, "A Comprehensive Survey of Face Databases for Constrained and Unconstrained Environments", 2nd IEEE Global Conference on Wireless Computing & Networking (GCWCN-2018), 23th-24th Nov., 2018, organized by STES's Sinhgad Institute of Technology, Lonavala, India.
126. Siddheshwar S. Gangonda, Prashant P. Patavardhan, Kailash J. Karande, "An Extensive Survey of Prominent Researches in Face Recognition under different Conditions", 4th International Conference on Computing, Communication, Control And Automation (ICCUBEA-2018), 16th to 18th Aug. 2018 organized by Pimpri Chinchwad College of Engineering (PCCOE), Pune, India.
127. Siddheshwar S. Gangonda, Prashant P. Patavardhan, Kailash J. Karande, "Analysis of Face Recognition Algorithms for Uncontrolled Environments", 3rd International Conference on Computing, Communication and Signal Processing (ICCASP 2018), 26th-27th Jan. 2018, organized by Dr. BATU, Lonere, India.
128. Siddheshwar Gangonda and Prachi Mukherji, "Speech Processing for Marathi Numeral Recognition", International Conference on Recent Trends, Feb 2012, IOK COE, Pune.
129. S. S. Gangonda, "Bidirectional Visitor Counter with automatic Door Lock System", National Conference on Computer, Communication and Information Technology (NCCIT-2018), 30th and 31st March 2018 organized by Department of Electronics and Telecommunication Engineering, SKN SCOE, Korti, Pandharpur.
130. Siddheshwar Gangonda and Prachi Mukherji, "Speech Processing for Marathi Numeral Recognition using MFCC & DTW Features", ePGCON 2012, 23rd and 24th April 2012 organized by Commis COE for Woman, Pune.
131. Siddheshwar Gangonda and Prachi Mukherji, "Speech Processing for Marathi Numeral Recognition", National Conference on Emerging Trends in Engineering and Technology (VNCET'12), 30th March 2012 organized by Vidyavardhini's College of Engineering and Technology, Vasai Road, Thane.
132. Siddheshwar Gangonda and Prachi Mukherji, "Speech Processing for Marathi Numeral Recognition", ePGCON 2011, 26th April 2011 organized by MAEER's MIT, Kothrud, Pune-38.
133. Siddheshwar Gangonda, "Medical Image Processing", Aavishkar-2K7, 17th and 18th March 2007 organized by Department of Electronics and Telecommunication Engineering, SVERI's COE, Pandharpur.
134. Siddheshwar Gangonda, "Image enhancement & Denoising", VISION 2k7, 28th Feb-2nd March 2007 organized by M.T.E. Society's Walchand College of Engineering, Sangli.
135. Siddheshwar Gangonda, "Electromagnetic interference & compatibility" KSHITIJ 2k6, 23rd and 24th Sept. 2006 organized by Department of Mechanical Engineering, SVERI's COE, Pandharpur.
136. A. Pise and K. Karande, "A genetic Algorithm-Driven Energy-Efficient routing strategy for optimizing performance in VANETs," Engineering Technology and Applied Science Research, vol. 15, no. 5, 2025, [Online]. Available: <https://etasr.com/index.php/ETASR/article/view/12744>
137. A. C. Pise, K. J. Karande, "Investigating Energy-Efficient Optimal Routing Protocols for VANETs: A Comprehensive Study", ICT for Intelligent Systems, Lecture Notes in Networks and Systems 1109, Proceedings of



ICTIS 2024 Volume 3, Lecture Notes in Networks and Systems, Springer, Singapore, ISSN 2367-3370, PP 407-417, 29 October 2024 https://doi.org/10.1007/978-981-97-6675-8_33.

138. A. C. Pise, et. al., "Smart Vehicle: A Systematic Review", International Journal - The Ciência & Engenharia - Science & Engineering Journal ISSN: 0103-944X Volume 11 Issue 1, 2023pp: 992–998, 2023.

139. A. C. Pise, et. al., "Smart Vehicle: A Systematic Review", International Journal of Research Publication and Reviews, ISSN 2582-7421, Vol 4, no 10, pp 2728-2731 October 2023.

140. A. C. Pise, et. al., "Development of BIOBOT System to Assist COVID Patient and Caretakers", European Journal of Molecular and Clinical Medicine ; 10(1):3472-3480, 2023.

141. A. C. Pise, et. al., "IoT Based Landmine Detection Robot", International Journal of Research in Science & Engineering ISSN: 2394-8299 Vol: 03, No. 04, June-July 2023.

142. A. C. Pise, et. al., "A Systematic survey on Estimation of Electrical Vehicle", Journal of Electronics, Computer Networking and Applied Mathematics (JECNAM) ISSN: 2799-1156, Volume 3, Issue 01, Pages 1-6, December 2023.

143. A. C. Pise, et. al., "Python Algorithm to Estimate Range of Electrical Vehicle", Web of Science, Vol 21, No 1 (2022) December 2022

144. A. C. Pise, et. al., "Implementation of BIOBOT System for COVID Patient and Caretakers Assistant using IOT", International Journal of Information technology and Computer Engineering. 30-43. 10.55529/ijitc.21.30.43, (2022).

145. A. C. Pise, et. al., "An IoT Based Real Time Monitoring of Agricultural and Micro irrigation system", International journal of scientific research in Engineering and management (IJSREM), VOLUME: 06 ISSUE: 04 | APRIL – 2022, ISSN:2582-3930.

146. A. C. Pise, Dr. K. J. Karande, "An Exploratory study of Cluster Based Routing Protocol in VANET: A Review", International Journal of Advanced Research in Engineering and Technology(IJARET), 12,10, 2021, 17-30, Manuscript ID :00000-94375 Source ID : 00000006, Journal_uploads/ IJARET/VOLUME_12_ISSUE_10/IJARET_12_10_002.pdf

147. A. C. Pise, et. al., "Android based Portable Health Support System," A Peer Referred & Indexed International Journal of Research, Vol.8, issue.4 , April 2019.

148. A. C. Pise, et. al., "Facial Expression Recognition Using Image Processing," International Journal of VLSI Design, Microelectronics and Embedded System, Vol.3, issue.2 , July 2018.

149. A. C. Pise, et. al., "Detection of Cast Iron Composition by Cooling Curve Analysis using Thermocouple Temperature Sensor," UGC Approved International Journal of Academic Science (IJRECE), Vol.6, Issue.3 , July-September 2018.

150. A. C. Pise, et. al., "Android Based Portable Health Support", System International Journal of Engineering Sciences & Research Technology (IJESRT 2017) Vol.6, Issue 8, pp 85-88 5th Aug 2017

151. A. C. Pise, et. al., "Adaptive Noise Cancellation in Speech Signal", International Journal of Innovative Engg and Technology, 2017

152. A. C. Pise, et. al., "Lung Cancer Detection System by using Baysian Classifier", ISSN 2454-7875, IJRPET, published online in conference special issue VESCOMM-2016, February 2016

153. A. C. Pise, et. al., "Review on Agricultural Plant Diseases Detection by Image Processing", ISSN 2278-621X, IJLTET, Vol 7, Issue 1 May 2016

154. A. C. Pise, et. al. "Segmentation of Retinal Images for Glaucoma Detection", International Journal of Engineering Research and Technology (06, June-2015).

155. A. C. Pise, et. al. "Color Local Texture Features Based Face Recognition", International Journal of Innovations in Engineering and Technology(IJiet) , Dec. 2014

156. A. C. Pise, et. al. "Single Chip Solution For Multimode Robotic Control", International Journal of Engineering Research and Technology (IJERT-2014), Vol. 3, Issue 12, Dec. 2014.

157. Anjali C. Pise et. al., "Remote monitoring of Greenhouse parameters using zigbee Wireless Sensor Network", International Journal of Engineering Research & Technology ISSN 2278-0181 (online) Vol. 3, Issue 2, and pp: (2412-2414), Feb. 2014.

158. A. C. Pise, K. J. Karande, "Cluster Head Selection Based on ACO In Vehicular Ad-hoc Networks", Machine Learning for Environmental Monitoring in Wireless Sensor Networks



159. A. C. Pise, K. J. Karande, "Architecture, Characteristics, Applications and Challenges in Vehicular Ad Hoc Networks" Presented in 27th IEEE International Symposium on Wireless Personal Multimedia Communications (WPMC 2024) "Secure 6G – AI Nexus: Where Technology Meets Humanity" Accepted for book chapter to be published in international Scopus index book by River publisher.
160. A. C. Pise, Dr. K. J. Karande, "K-mean Energy Efficient Optimal Cluster Based Routing Protocol in Vehicular Ad Hoc Networks", International Conference on Innovations in Artificial Intelligence and Machine Learning (ICAIML-2022), August 20th and 21st 2022 Springer database Conference.
161. A. C. Pise, Mr. D. Nale, "Web-Based Application for Result Analysis", ", International Conference on Innovations in Artificial Intelligence and Machine Learning (ICAIML-2022), August 20th and 21st 2022 Springer database Conference.
162. A. C. Pise, et. al., "Detection of Cast Iron Composition by Cooling Curve Analysis using Thermocouple Temperature Sensor," 2nd International Conference on Engineering Technology, Science and Management Innovation (ICETSMI – 2018), 2nd September 2018.
163. A. C. Pise, et. al., "Facial Expression Recognition Using Facial Features," IEEE International Conference on Communication and Electronics Systems (ICCES 2018), October 2018.
164. A. C. Pise, et. al., "Estimating Parameters of Cast Iron Composition using Cooling Curve Analysis," IEEE International Conference on Communication and Electronics Systems (ICCES 2018), Coimbatore, October 2018.
165. A. C. Pise, et. al., "Android based portable Health Support System," International Conference on Innovations in Engineering and Technology (CIET 2016), SKN Sinhgad College of Engineering, 30-31 Dec 2016.
166. A. C. Pise, et. al., "Baysian Classifier & FCM Segmentation for Lung Cancer Detection in early stage," International Conference on Innovations in Engineering and Technology (CIET 2016), SKN Sinhgad College of Engineering, 30-31 Dec 2016.
167. A. C. Pise, et. al., "Cast Iron Composition Measurement by Coding Curve Analysis," International Conference on Innovations in Engineering and Technology (CIET 2016), SKN Sinhgad College of Engineering, 30-31 Dec 2016.
168. A. C. Pise, et. al., "War field Intelligence Defence Flaging Vehicle," International Conference on Innovations in Engineering and Technology (CIET 2016), SKN Sinhgad College of Engineering, 30-31 Dec 2016.
169. A. C. Pise, et. al. "Disease Detection of Pomegranate Plant", IEEE sponsored International Conference on Computation of Power, Energy, Information and Communication, 22- 23 Apr. 2015.
170. A. C. Pise, P. Bankar. "Face Recognition by using GABOR and LBP", IEEE International Conference on Communication and Signal Processing, ICCSP, 2-4 Apr. 2015
171. A. C. Pise, et. al. "Single Chip Solution For Multimode Robotic Control", Ist IEEE International Conferene on Computing Communication and Automation, 26-27 Feb2015.
172. Anjali C. Pise, Vaishali S. Katti, "Efficient Design for Monitoring of Greenhouse Parameters using Zigbee Wireless Sensor Network", fifth SARC international conference IRF,IEEE forum ISBN 978-93-84209-21-6,pp 24-26, 25th May 2014
173. A. C. Pise, P. Bankar, "Face Recognition using Color Local Texture Features", International Conference on Electronics and Telecommunication, Electrical and Computer Engineering, Apr.2014.
174. A. C. Pise, et.al. "Monitoring parameters of Greenhouse using Zigbee Wireless Sensor Network", 1st International Conference on Electronics and Telecommunication, Electrical and Computer Engineering, 5-6 Apr.2014.
175. A. C. Pise, et. al. "Compensation schemes and performance Analysis of IQ Imbalances in Direct Conversion Receivers", International Conference at GHPCOE, Gujarat, (Online Proceeding is Available), 2009.
176. A. C. Pise, K. J. Karande, "Energy-Efficient Optimal Routing Protocols in VANETs", 66th Annual IETE Convention, AIC -2023 September16-17, 2023, under the Theme: The Role of 5G In Enabling Digital Transformation for Rural Upliftment.
177. A. C. Pise, et. al. "Automatic Bottle Filling Machine using Raspberry Pi", National Conference on computer ;Communication & information Technology (NCCIT-2018) dated 30th & 31st March 2018.
178. A. C. Pise, et. al. "Design & Implementation of ALU using VHDL", National Conference on computer ;Communication & information Technology (NCCIT-2018) dated 30th & 31st March 2018.



179. A. C. Pise, et. al. "Mechanism and Control of Autonomus four rotor Quad copter", National Conference on Computer, Electrical and Electronics Engineering, 23- 24 Apr. 2016.
180. A. C. Pise, et. al. "Segmentation of Optic Disk and Optic Cup from retinal Images", ICEECMPE – Chennai, June 2015
181. A. C. Pise, et. al. "Diseases Detection of Pomegranate Plant", IEEE Sponsored International conference on Computation of Power, Energy , April 2015.
182. A. C. Pise, et. al. "Compensation Techniques for I/Q Imbalance in Direct-Conversion Receivers", Conference at SCOE, Pune 2010.
183. A. C. Pise, et. al. "I/Q Imbalance compensation Techniques in Direct Conversion Receiver ", Advancing Trends in Engineering and Management Technologies, ATEMT-2009, Conference at Shri Ramdeobaba Kamla Nehru Engineering College, Nagpur, 20-21 November 2009
184. A. C. Pise, et. al. "Compensation Techniques for I/Q Imbalance in Direct Conversion Receiver", Conference at PICT, Pune 2008.
185. A. C. Pise, et. al. "I/Q Imbalance compensation Techniques in Direct Conversion Receiver ", Conference at DYCOE, Pune 2008.
186. A. C. Pise, et. al. "DUCHA: A New Dual channel MAC protocol for Multihop Ad-Hoc Networks", Conference at SVCP, Pune 2007.
187. Godase, V., Pawar, P., Nagane, S., & Kumbhar, S. (2024). Automatic railway horn system using node MCU. *Journal of Control & Instrumentation*, 15(1).
188. Godase, V., & Godase, J. (2024). Diet prediction and feature importance of gut microbiome using machine learning. *Evolution in Electrical and Electronic Engineering*, 5(2), 214-219.
189. Jamadade, V. K., Ghodke, M. G., Katakdhond, S. S., & Godase, V. A Comprehensive Review on Scalable Arduino Radar Platform for Real-time Object Detection and Mapping.
190. Godase, V. (2025). A comprehensive study of revolutionizing EV charging with solar-powered wireless solutions. *Advance Research in Power Electronics and Devices e-ISSN*, 3048-7145.
191. Godase, V. (2025, April). Advanced Neural Network Models for Optimal Energy Management in Microgrids with Integrated Electric Vehicles. In *Proceedings of the International Conference on Trends in Material Science and Inventive Materials (ICTMIM-2025) DVD Part Number: CFP250J1-DVD*.
192. Dange, R., Attar, E., Ghodake, P., & Godase, V. (2023). Smart agriculture automation using ESP8266 NodeMCU. *J. Electron. Comput. Netw. Appl. Math.*, (35), 1-9.
193. Godase, V. (2025). Optimized Algorithm for Face Recognition using Deepface and Multi-task Cascaded Convolutional Network (MTCNN). *Optimum Science Journal*.
194. Mane, V. G. A. L. K., & Gangonda, K. D. S. Pipeline Survey Robot.
195. Godase, V. (2025). Navigating the digital battlefield: An in-depth analysis of cyber-attacks and cybercrime. *International Journal of Data Science, Bioinformatics and Cyber Security*, 1(1), 16-27.
196. Godase, V., & Jagadale, A. (2019). Three element control using PLC, PID & SCADA interface. *International Journal for Scientific Research & Development*, 7(2), 1105-1109.
197. Godase, V. (2025). Edge AI for Smart Surveillance: Real-time Human Activity Recognition on Low-power Devices. *International Journal of AI and Machine Learning Innovations in Electronics and Communication Technology*, 1(1), 29-46.
198. Godase, V., Modi, S., Misal, V., & Kulkarni, S. (2025). LoRaEdge-ESP32 synergy: Revolutionizing farm weather data collection with low-power, long-range IoT. *Advance Research in Analog and Digital Communications*, 2(2), 1-11.
199. Godase, V. (2025). Comparative study of ladder logic and structured text programming for PLC. Available at SSRN 5383802.
200. Godase, V., Modi, S., Misal, V., & Kulkarni, S. Real-time object detection for autonomous drone navigation using YOLOv8, || . *Advance Research in Communication Engineering and its Innovations*, 2(2), 17-27.



201. Godase, V. (2025). Smart energy management in manufacturing plants using PLC and SCADA. *Advance Research in Power Electronics and Devices*, 2(2), 14-24.
202. Godase, V. (2025). IoT-MCU Integrated Framework for Field Pond Surveillance and Water Resource Optimization. *International Journal of Emerging IoT Technologies in Smart Electronics and Communication*, 1(1), 9-19.
203. Godase, V. (2025). Graphene-Based Nano-Antennas for Terahertz Communication. *International Journal of Digital Electronics and Microprocessor Technology*, 1(2), 1-14.
204. Godase, V., Khiste, R., & Palimkar, V. (2025). AI-Optimized Reconfigurable Antennas for 6G Communication Systems. *Journal of RF and Microwave Communication Technologies*, 2(3), 1-12.
205. Bhaganagare, S., Chavan, S., Gavali, S., & Godase, V. V. (2025). Voice-Controlled Home Automation with ESP32: A Systematic Review of IoT-Based Solutions. *Journal of Microprocessor and Microcontroller Research*, 2(3), 1-13.
206. Jamadade, V. K., Ghodke, M. G., Katakdhond, S. S., & Godase, V. A Comprehensive Review on Scalable Arduino Radar Platform for Real-time Object Detection and Mapping.
207. Godase, V. (2025). Cross-Domain Comparative Analysis of Microwave Imaging Systems for Medical Diagnostics and Industrial Testing. *Journal of Microwave Engineering & Technologies*, 12(2), 39-48p.
208. V. K. Jamadade, M. G. Ghodke, S. S. Katakdhond, and V. Godase, —A Review on Real-time Substation Feeder Power Line Monitoring and Auditing Systems,” *International Journal of Emerging IoT Technologies in Smart Electronics and Communication*, vol. 1, no. 2, pp. 1-16, Sep. 2025.
209. V. V. Godase, “VLSI-Integrated Energy Harvesting Architectures for Battery-Free IoT Edge Systems,” *Journal of Electronics Design and Technology*, vol. 2, no. 3, pp. 1-12, Sep. 2025.
210. A. Salunkhe et al., “A Review on Real-Time RFID-Based Smart Attendance Systems for Efficient Record Management,” *Advance Research in Analog and Digital Communications*, vol. 2, no. 2, pp.32-46, Aug. 2025.
211. Vaibhav, V. G. (2025). A Neuromorphic-Inspired, Low-Power VLSI Architecture for Edge AI in IoT Sensor Nodes. *Journal of Microelectronics and Solid State Devices*, 12(2), 41-47p.
212. Nagane, M.S., Pawar, M.P., & Godase, P.V. (2022). Cinematica Sentiment Analysis. *Journal of Image Processing and Intelligent Remote Sensing*.
213. Godase, V.V. (2025). Tools of Research. *SSRN Electronic Journal*.
214. Godase, V. (n.d.). EDUCATION AS EMPOWERMENT: THE KEY TO WOMEN’S SOCIO ECONOMIC DEVELOPMENT. *Women Empowerment and Development*, 174–179.
215. Godase, V. (n.d.). COMPREHENSIVE REVIEW ON EXPLAINABLE AI TO ADDRESSES THE BLACK BOX CHALLENGE AND ITS ROLE IN TRUSTWORTHY SYSTEMS. In *Sinhgad College of Engineering, Artificial Intelligence Education and Innovation* (pp. 127–132).
216. Godase, V. (n.d.-b). REVOLUTIONIZING HEALTHCARE DELIVERY WITH AI-POWERED DIAGNOSTICS: A COMPREHENSIVE REVIEW. In *SKN Sinhgad College of Engineering, SKN Sinhgad College of Engineering* (pp. 58–61).
217. Dhope, V. (2024). SMART PLANT MONITORING SYSTEM. In *International Journal of Creative Research Thoughts (IJCRT)*. <https://www.ijcrt.org>
218. M. M. Zade, Sushant D. Kambale, Shweta A. Mane, Prathamesh M. Jadhav. (2025) “IoT Based early fire detection in Jungles”. *RIGJA&AR* Volume 2 Issue 1, ISSN:2998-4459. DOI:<https://doi.org/10.5281/zenodo.15056435>
219. M. M. Zade, Bramhadev B. Rupanar, Vrushal S. Shilawant, Akansha R. Pawar (2025) “IoT Flood Monitoring & Alerting System using Raspberry Pi-Pico ” *International Journal of Research Publication & Reviews*, Volume 6, Issue 3, ISSN:2582-7421. DOI:<https://ijrpr.com/uploads/V6ISSUE3/IJRPR40251.pdf>
220. M.M.Zade (2022) “Touchless Fingerprint Recognition System”(Paper-ID 907)(2022) *International Conference on “Advanced Technologies for Societal Applications: Techno-Societal 2022* <https://link.springer.com/book/10.1007/978-3-031-34644-6?page=6>



221. Mr.M.M.Zade published the paper on “Automation of Color Object Sorting Conveyor Belt”, in International Journal of Scientific Research in Engineering & Management (IJSREM),ISSN:2582-3930 Volume 06 ,Issue 11th November 2022.
222. Mr.M.M.Zade published the paper on “Cloud Based Patient Health Record Tracking web Developement”,in International Journal of Advanced Research in Science, Communication & Technology(IJAR SCT),ISSN NO:2581-9429 Volume 02 ,Issue 03,DOI 1048175/IJAR SCT-3705,IF 6.252, May 2022.
223. Mr. Mahesh M Zade, “Performance analysis of PSNR Vs. Impulse Noise for the enhancement of Image using SMF”, Journal of Applied Science & Computations (JASC UGC Approved), Volume VI, Issue II, Feb.2019
224. Mr. Mahesh M Zade, “Classification of Power Quality Disturbances Using SVM & their Efficiency Comparison”, Journal of Applied Science & Computations (JASC UGC Approved), Volume VI, Issue II, Feb.2019
225. Mr. Mahesh M Zade, “Dynamic Clustering of Wireless Sensor Network Using Modified AODV”, Journal of Applied Science & Computations (JASC UGC Approved), Volume VI, Issue II, Feb.2019
226. Mr. Mahesh M Zade, “Performance analysis of PSNR Vs. Impulse Noise for the enhancement of Image using SMF”, National Conference on Mathematical Modeling and Computational Intelligence 2K19 (MMCI-2k19), in association with JASC, at S. B. Patil College of Engineering, Indapur, Feb.2019
227. Mr. Mahesh M Zade, “Classification of Power Quality Disturbances Using SVM & their Efficiency Comparison”, National Conference on Mathematical Modeling and Computational Intelligence 2K19 (MMCI-2k19), in association with JASC, at S. B. Patil College of Engineering, Indapur Feb.2019
228. Mr. Mahesh M Zade, “Dynamic Clustering of Wireless Sensor Network Using Modified AODV”, National Conference on Mathematical Modeling and Computational Intelligence 2K19 (MMCI-2k19), in association with JASC, at S. B. Patil College of Engineering, Indapur Feb.2019
229. Mr. Mahesh M Zade & Mr.S.M.Karve,"Performance Analysis of Median Filter for Enhancement of Highly Corrupted Images", National Conference on Advanced Trends in Engineering, Association with IRJMS, Karmyogi Engineering College, Shelave, Pandharpur, March 2016.
230. Mr. Mahesh M Zade & Mr.S.M.Karve,"Implementation of Reed Solomen Encoder & Decoder Using FPGA",National Conference on Advanced Trends in Engineering, Association with IRJMS, Karmyogi Engineering College, Shelave, Pandharpur, March 2016.
231. Mr. Mahesh M Zade & Dr.S.M.Mukane,"Performance of Switching Median Filter for Enhancement of Image", National Conference on Mechatronics at Sinhgad Institute of Technology and Science, Narhe, Pune, Feb. 2016.
232. Mr. Mahesh M Zade & Dr.S.M.Mukane,"Enhancement of Image with the help of Switching Median Filter", National Conference on Emerging Trends in Electronics & Telecommunication Engineering, SVERI's College of Engineering Pandharpur, NCET 2013.
233. Mr.Mahesh M Zade & Dr.S.M.Mukane,"Enhancement of Image with the help of Switching Median Filter", International Journal of Computer Application (IJCA) SVERI's College of Engineering, Pandharpur, Dec.2013.
234. A. O. Mulani, V. Godase, S. Takale, and R. Ghodake, “Secure Image Authentication using AES and DWT Watermarking on Reconfigurable Platform,” International Journal of Embedded System and VLSI Design, vol. 1, no. 2, pp. 14-20, Oct. 2025.

