

University Admission Chance Predictor-A Systematic Review

Akash Katte¹, Prathamesh Aradhye², Anurag Pawar³, Prof. V. B. Utpat⁴

^{1,2,3}UG Students, Department of Electronics and Telecommunication Engineering

⁴Assistant Professor, Department of Electronics and Telecommunication Engineering

SKN Sinhgad College of Engineering, Pandharpur

prathamesharadhye@gmail.com, akashkotte316@gmail.com,

pawaranurag9146@gmail.com, vaishnavi.utpat@sknscoe.ac.in

Abstract: *Taking admissions is one of major topic now a days taking admissions into university in desired branch or domain is every one's expectations now a days, but a student doesn't know his chances for getting admissions in university and that always been a major concerns about admissions*

In today's competitive academic environment, securing admission to top universities has become a major challenge for students worldwide. With thousands of applicants competing for limited seats, universities rely on various academic and non-academic parameters to evaluate candidates. To assist students in understanding their chances of admission, data-driven models can play a crucial role. This project, titled "University Admission Chance Predictor", is designed to estimate the probability of a student being admitted to a university based on key admission factors. Poultry admissions is one of major topic now a days taking admissions into university in desired branch or domain is every ones expectations now a days, but a student doesn't know his chances for getting admissions in university and that always been a major concerns about admissions. University admission chance predictor studies data provided by student and predictions according to it, using various libraries such as pandas and numpy ,also tells that if you have a chance in your desired field or branch or domain or not

Keywords: *NumPy, Pandas, Jupyter, Scikit-learn*

I. INTRODUCTION

Numerous factors, such as academic exam results, academic background, research activity, and the quality of the statement of purpose, affect university admissions. In this project, we create a predictive model that calculates the likelihood of admission using a dataset that includes past student application records. This predictive tool can help students identify the important factors influencing their chances of admission or help colleges automate early assessments. Using robust Python modules like Pandas, NumPy, and Scikit-learn, the project is implemented. Pandas is used for pre-processing and data manipulation, making sure the dataset is organised and clean for analysis. While Scikit-learn offers machine learning tools for creating prediction models, NumPy facilitates numerical computations. A dataset comprising parameters like undergraduate GPA, research experience, university rating, letter of recommendation (LOR) rating, statement of purpose (SOP) strength, GRE and TOEFL scores, and more is used to train the algorithm. Together, these characteristics affect the chance of admission.

Data pre-processing, which addresses missing values and inconsistencies, is the first step in the project's workflow. Scaling and feature selection are used to enhance model performance. To find the best accurate predictive model, a variety of machine learning methods are explored, including Random Forests, Decision Trees, and Linear Regression. The model can forecast the percentage of new student profiles that will be admitted after it has been trained. Data pre-processing, which addresses missing values and inconsistencies, is the first step in the project's workflow. Scaling and feature selection are used to enhance model performance. To find the best accurate predictive model, a variety of machine learning methods are explored, including Random Forests, Decision Trees, and Linear Regression. The model can forecast the percentage of new student profiles that will be admitted after it has been trained.



II. LITERATURE SURVEY

Kiaghadi and Hoseinpour et al[1] present a prescriptive-analytics framework for university admissions that moves beyond descriptive and predictive stages to recommend optimal admission decisions under constraints.

Alas et al [2] Using the Theory of Planned Behaviour as a guide, examine second-chance admissions procedures that give previously rejected applicants a second shot. They investigate the effects of attitudes, subjective norms, and perceived behavioural control on intake and subsequent achievement by combining survey data with academic records

Katti et al[3] with jis colleagues demonstrate a practical pipeline for university admission prediction leveraging Google Vertex AI. They describe data preprocessing, feature engineering (academic records, extracurriculars, demographics), and model training using automated ML on the Vertex platform. Comparative results show tree-based ensembles and AutoML models achieve competitive accuracy.

Leckie and Maragkou et al [4]analyze mismatches between teacher-predicted and students' achieved grades, focusing on sociodemographic and school-type disparities. Using large administrative datasets, they show systematic overprediction for advantaged groups and certain school types, while disadvantaged students often receive underpredictions.

Lee et al[5] propose NLP methods to support holistic admissions by extracting meaningful signals from essays and recommendation letters. They combine document embeddings, interpretable features (subjectivity, topical relevance), and fairness-aware classifiers to surface strengths and potential biases in textual materials.

joachims & Kizilcec et al [6] develop NLP tools to extract structured insights from application texts, demonstrating how automated features can assist reviewers while maintaining interpretability. They address bias mitigation, human oversight, and integration into admission workflows, arguing for careful institutional policy to govern augmentation tools.

Goni and coauthors et al [7]present a deep neural network to predict graduate admission chances from applicant data including grades, test scores, and experience. They compare DNN performance with classical classifiers and report superior predictive accuracy and calibration when the network is properly regularized.

Kulsoom et al[9]. explore estimating personality traits from Statements of Purpose (SOPs) using deep learning models trained to map text to personality dimensions (e.g., Big Five). They combine pretrained language models with fine-tuning on labelled personality datasets and propose transfer learning to adapt models to SOP-style text.

Xing et al.[11] investigate prevalence and predictors of deep vein thrombosis (DVT) among elderly Chinese hip-fracture patients, developing a risk-scoring predictor to guide screening. Using clinical cohorts, they identify key risk factors—age, comorbidities, immobility—and derive a composite predictor with improved sensitivity over standard criteria.

Stapel and colleagues [12] Analyse the phase angle of the bioelectrical impedance analysis (BIA), which is performed at the time of ICU admission, as a predictor of 90-day death. They found that, regardless of conventional severity levels, smaller phase angles are associated with increased mortality in a critical-care group.

Table 1: University admission chance predictor.

Paper / Project	System Architecture	Cost	Ease of Implementation	Performance	User Experience	Limitations
Kiaghadi and Hoseinpou r et al [1]	Logistic Regression-based admission	Low–Moderate	Moderate	Real-time monitoring & control	Moderate accuracy, explainabl e	limited to linear relationships
Alas et al. [2]	Machine Learning (Random Forest) model	Moderate	Moderate	Effective health data tracking	User-friendly if deployed in web app	Overfitting risk, needs balanced dataset
katti et al. [3]	Deep Learning (ANN) predictor	Moderate	Easy (web services)	Accurate microclimat e sensing	Good prediction confidence	Lacks interpretability (“black box”)



Leckie and Maragkou et al. [4]	Hybrid Model (ML + Fuzzy Logic)	High	Complex (Principles and algorithms)	Automates farm processes	Flexible, handles vague inputs	Computationally heavy
lee et al. [5,6]	Cloud-based Admission Predictor	Moderate – High	Moderate (ML training required)	Detects & mitigates aggression	Accessible on multiple devices	Dependent on internet & service costs
joachims & Kizilcec et al. [7]	AI-driven Recommendation System	Moderate	Easy (network config)	High dependability & resilience	Interactive, user-centric	High training cost, needs large text datasets
Goni and coauthors et al. [8]	Data Mining-based Admission Analyzer	Moderate	Moderate (requires ML integration)	Data-driven accurate monitoring	Useful for universities' internal use	Less effective for individual predictions
Kulsoom et al. [9]	Mobile App-based Admission Predictor	Low	Moderate (sensor-based setup)	Effective pH & water quality detection	Convenient & accessible	Limited model complexity due to mobile constraints

III. PROPOSED METHODOLOGY

The goal of this project is to methodically create, train, and assess a machine learning-based model that forecasts the likelihood of being admitted to a university. Data gathering, pre-processing, model selection, training, evaluation, and deployment are some of the stages involved. The dataset used contains real student admission records with essential parameters: GRE score, TOEFL score, university rating, SOP strength, LOR rating

Figure 1 shows block diagram of proposed methodology

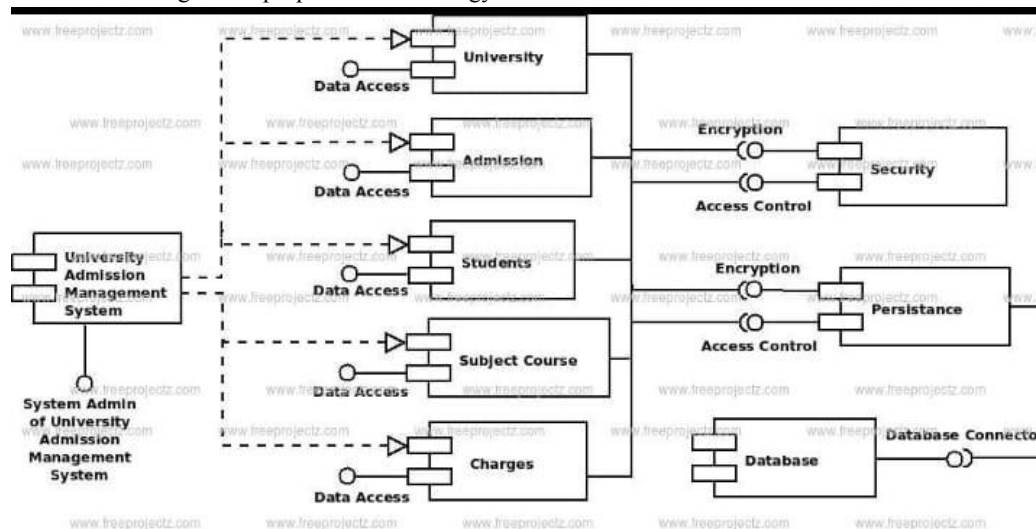


Figure1: Block Diagram of Proposed System

To determine which characteristics have the biggest influence on admission chances, statistical tests and correlation analysis are used. This stage guarantees dimensionality reduction and raises the predictive model's precision and effectiveness. A number of Scikit-learn machine learning methods are used, such as Support Vector Machine (SVM), Random Forest, Decision Tree, and Linear Regression. The efficacy of these algorithms in classification and regression



tasks led to their selection. To assess the generalisability of the model, the dataset is split into training and testing subsets, usually in an 80:20 ratio. To avoid overfitting, every model is trained on the training dataset and then cross-validated. To maximise model performance, grid search and random search techniques are used for hyperparameter tuning.

Performance indicators including accuracy, R2 score, Mean Squared Error (MSE), and Root Mean Squared Error (RMSE) are used to assess the models. To identify the top-performing model for forecasting admission probability, comparative analysis is done. For new candidates, the finished model can produce probabilistic admission results. Students can enter their information and get their estimated likelihood of admission using a straightforward Python user interface or script. By following these procedures, the technique guarantees the creation of a trustworthy, understandable, and useful instrument for forecasting university admission prospects. The project's methodology employs a systematic strategy to guarantee the admission prediction system's accuracy, dependability, and usefulness.

Data gathering, pre-processing, exploratory analysis, feature selection, model construction, training, assessment, and deployment are its seven main phases. The approach included iterative experimentation to improve the predictive model in addition to the main phases mentioned. After adjusting the hyperparameters, feature scaling strategies, and pre-processing procedures, several model versions were trained and compared. Plots for residual analysis, correlation heatmaps, and error distributions were created using visualisation tools like Matplotlib and Seaborn, which aided in diagnosing model performance. The project makes use of a publicly accessible dataset that includes student admission records with information on undergraduate GPA, research experience, university rating, Statement of Purpose (SOP) strength, Letter of Recommendation (LOR) rating, GRE and TOEFL scores, and more.

These attributes serve as independent variables, while the dependent variable is the "Chance of Admission." data pre-processing is performed using Pandas and NumPy

IV. RESULT AND DISCUSSION

With the use of a regression-based machine learning technique and an NLP module for qualitative Statement of Purpose (SOP) analysis, the research sought to forecast the likelihood that students applying to institutions would be admitted. Following an evaluation of several regression models, including Random Forest, Support Vector Machine (SVM), and Linear Regression, the K-Nearest Neighbours (KNN) Regressor was shown to be the most effective.

According to these findings, the KNN model can account for 82% of the variation in admission chances while maintaining a low prediction error, which makes it dependable for use in academic admissions forecasting. Strength of Statement of Purpose (SOP) and CGPA were determined to have the biggest impact on admission predictions out of all the criteria. The Letter of Recommendation (LOR) score, research experience, and university rating were other important variables. A feature-weight visualisation was included to improve model transparency. Cosine similarity was also used to create a comparison tool that enhances interpretability and user engagement by enabling users to browse the profiles of applicants who share comparable academic traits. Model accuracy and stability were greatly increased by the data pre-processing procedures, which included standardising features using Standard Scaler and mean imputation for missing values.

For smooth deployment within the web application, the trained model and pre-processing objects (scaler and imputer) were serialised using pickle. Future research should investigate neural networks or ensemble models for possibly improved accuracy and resilience, even if the KNN model performed admirably. Furthermore, more thorough text-based SOP features (such as subject relevance and coherence) could improve the system's predictive power even more. This study helped users improve their writing for a better impression on university applications by providing them with helpful criticism on the tone, organisation, and emotional balance of their SOPs. A comprehensive admission assistance tool was produced by combining textual sentiment analysis with regression-based prediction. High predicted accuracy was attained by the model without sacrificing interpretability. NLP feedback was incorporated to provide a qualitative element that enhanced the quantitative forecasts.



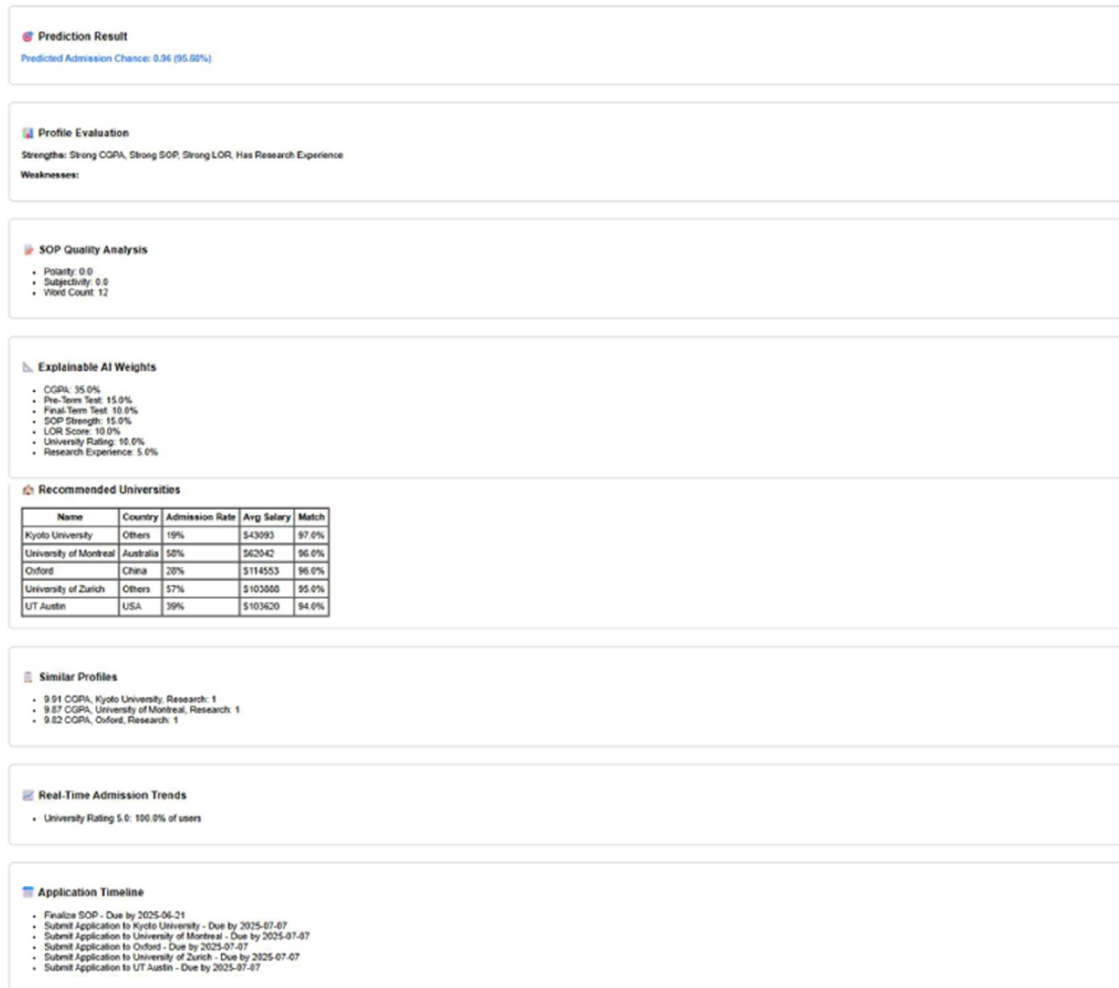


FIG: OUTPUT RESULTS

V. CONCLUSION

The project on University Admission Chance Prediction successfully demonstrates how machine learning can be leveraged to support educational decision-making. By utilizing Python libraries such as Pandas, NumPy, and Scikit-learn, along with development tools like VS Code, Jupyter Notebook, and Anaconda, the system was able to handle data pre-processing, model training, and evaluation in an efficient and structured manner. The predictor studies key academic parameters such as GRE scores, TOEFL scores, GPA, research experience, SOP, and LOR ratings to provide a probabilistic estimate of a student's admission chances. This data-driven approach reduces uncertainty, guides applicants in making informed decisions, and saves time compared to traditional trial-and-error applications. Various machine learning models were implemented and compared, with performance metrics (R^2 , MSE, RMSE) ensuring the reliability of predictions. The use of Scikit-learn for model implementation allowed systematic experimentation with regression and classification methods, ensuring both accuracy and interpretability. The project highlights significant advantages such as improved efficiency, transparency in decision-making, and scalability for large datasets. It also opens pathways for multiple applications including personalized student guidance, institutional admission support, and educational policy analysis.



REFERENCES

1. Kiaghadi, M., & Hoseinpour, P. (2022). University admission process: a prescriptive analytics approach. *Artificial Intelligence Review*, 56, 233-256.
2. Alas, Y., Anshari, M., Sabtu, N.I., & Yunus, N. (2016). Second-chance university admission, the theory of planned behaviour and student achievement. *International Review of Education*, 62, 299-316.
3. Katti, J., Agarwal, J., Bharata, S., Shinde, S.V., Mane, S., & Biradar, V. (2022). University Admission Prediction Using Google Vertex AI. 2022 *First International Conference on Artificial Intelligence Trends and Pattern Recognition (ICAITPR)*, 1-5.
4. Leckie, G., & Maragkou, K. (2024). Student sociodemographic and school type differences in teacher-predicted vs. achieved grades for university admission. *Higher Education*.
5. Lee, J., Thymes, B., Zhou, J., Joachims, T., & Kizilcec, R.F. (2023). Augmenting Holistic Review in University Admission using Natural Language Processing for Essays and Recommendation Letters. *ArXiv, abs/2306.17575*.
6. Lee, J., Thymes, B., Zhou, J., Joachims, T., & Kizilcec, R.F. (2023). Augmenting Holistic Review in University Admission using Natural Language Processing for Essays and Recommendation Letters. *ArXiv, abs/2306.17575*.
7. Omaer Faruq Goni, M., Matin, A., Hasan, T., Abu Ismail Siddique, M., Jyoti, O., & Sifnatul Hasnain, F.M. (2020). Graduate Admission Chance Prediction Using Deep Neural Network. 2020 *IEEE International Women in Engineering (WIE) Conference on Electrical and Computer Engineering (WIECON-ECE)*, 259-262.
8. Alothman, B., Alazmi, H., Ali, M.B., AlQallaf, N., & Khan, M. (2022). Accelerating University Admission System using Machine Learning Techniques. 2022 *Thirteenth International Conference on Ubiquitous and Future Networks (ICUFN)*, 439-443.
9. Kulsoom, S., Latif, S., Saba, T., & Latif, R. (2022). Students Personality Assessment using Deep Learning from University Admission Statement of Purpose. 2022 *7th International Conference on Data Science and Machine Learning Applications (CDMA)*, 224-229.
10. Mengash, H.A. (2020). Using Data Mining Techniques to Predict Student Performance to Support Decision Making in University Admission Systems. *IEEE Access*, 8, 55462-55470.
11. Xing, F., Li, L., Long, Y., & Xiang, Z. (2018). Admission prevalence of deep vein thrombosis in elderly Chinese patients with hip fracture and a new predictor based on risk factors for thrombosis screening. *BMC Musculoskeletal Disorders*, 19. Stapel, S.N., Looijaard, W.G., Dekker,
12. I.M., Girbes, A.R., Weijs, P.J., & Oudemans-van Straaten, H.M. (2018). Bioelectrical impedance analysis-derived phase angle at admission as a predictor of 90-day mortality in intensive care patients. *European Journal of Clinical Nutrition*, 72, 1019 - 1025.
13. Stapel, S.N., Looijaard, W.G., Dekker, I.M., Girbes, A.R., Weijs, P.J., & Oudemans-van Straaten, H.M. (2018). Bioelectrical impedance analysis-derived phase angle at admission as a predictor of 90-day mortality in intensive care patients. *European Journal of Clinical Nutrition*, 72, 1019 - 1025.
14. Golden, P., Mojesh, K., Devarapalli, L.M., Reddy, P.N., Rajesh, S., & Chawla, A. (2021). A Comparative Study on University Admission Predictions Using Machine Learning Techniques. *International Journal of Scientific Research in Computer Science, Engineering and Information Technology*.
15. Sridhar, S., Mootha, S., & Kolagati, S. (2020). A University Admission Prediction System using Stacked Ensemble Learning. 2020 *Advanced Computing and Communication Technologies for High Performance Applications (ACCTHPA)*, 162-167.
16. Mitobe, Y., Morishita, S., Ohashi, K., Sakai, S., Uchiyama, M., Abeywickrama, H.M., Yamada, E., Kikuchi, Y., Nitta, M., Honda, T., Endoh, H., Kimura, S., Sakano, S., & Koyama, Y. (2019). Skeletal Muscle Index at Intensive Care Unit Admission Is a Predictor of Intensive Care Unit-Acquired Weakness in Patients With Sepsis. *Journal of Clinical Medicine Research*, 11, 834 - 841.
17. (2020). Prediction for University Admission using Machine Learning. *International Journal of Recent Technology and Engineering*.
18. Bestetti, R.B., Couto, L.B., Roncato-Paiva, P., Romão, G.S., Faria-Jr, M., Furlan-Daniel, R.A., Geleilete, T.J., Jorge-Neto, S.D., Mendonça, F.P., Garcia, M.E., & Durand, M.D. (2020). University Admission Test Associates



- with Academic Performance at the End of Medical Course in a PBL Medical Hybrid Curriculum. *Advances in Medical Education and Practice*, 11, 579 - 585.
19. Chiang, Y. (2018). When Things Don't Go as Planned: Contingencies, Cultural Capital, and Parental Involvement for Elite University Admission in China. *Comparative Education Review*, 62, 503 - 521.
 20. Migliaretti, G., Bozzaro, S., Siliquini, R., Stura, I., Costa, G., & Cavallo, F. (2017). Is the admission test for a course in medicine a good predictor of academic performance? A case-control experience at the school of medicine of Turin. *BMJ Open*, 7.
 21. Ahmed, A.H., Ahmad, S., Abu Sayed, M., Sarkar, M., Ayon, E.H., Mia, T., & Koli, A. (2023). Predicting the Possibility of Student Admission into Graduate Admission by Regression Model: A Statistical Analysis. *Journal of Mathematics and Statistics Studies*.
 22. Nurieva, L.M., & Kiselev, S.G. (2019). Distribution of University Admission Quotas: Problems of Competitive Selection Process. *The Education and science journal*.
 23. Odukoya, J.A., Adekeye, O.A., Atayero, Omole, D.O., Badejo, J.A., & Popoola, T. (2018). The Predictive Validity of University Admission Examinations: Case Study of Nigerian Unified Tertiary Matriculation Examination.
 24. Fathiya, H., & Sadath, L. (2021). University Admissions Predictor Using Logistic Regression. *2021 International Conference on Computational Intelligence and Knowledge Economy (ICCIKE)*, 46-51.
 25. Escobar-Valdivia, E.J., González-Aguirre, J.E., Carrillo-Cisneros, E.R., Guerra-Leza, K., & Mercado-Longoria, R. (2015). Eosinophil count at intensive care unit admission was not predictor of hospital mortality: results of a case control study. *Journal of Intensive Care*, 3.
 26. Bhrugubanda, M., Udutha, V., & Yella, S. (2023). Post Graduate Admission Prediction Using ANN. *International Journal for Research in Applied Science and Engineering Technology*.
 27. Pinxten, M., Soom, C.V., Peeters, C., Laet, T.D., & Langie, G. (2019). At-risk at the gate: prediction of study success of first-year science and engineering students in an open-admission university in Flanders—any incremental validity of study strategies? *European Journal of Psychology of Education*, 34, 45-66.
 28. Zuo, P. (2024). Multiple Linear Regression with Applications in College Admission Rate. *Highlights in Business, Economics and Management*.
 29. Samad, A.A., Rahman, S.Z., & Yahaya, S.N. (2008). Refining English Language Tests for University Admission: A Malaysian example.
 30. Steinbach, D., Ahrens, P.C., Schmidt, M., Federbusch, M., Heuft, L., Lübbert, C., Nauck, M., Gründling, M., Isermann, B., Gibb, S., & Kaiser, T. (2024). Applying Machine Learning to Blood Count Data Predicts Sepsis with ICU Admission. *Clinical chemistry*, 70 3, 506-515.
 31. 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.
 32. 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.
 33. Gadade, B., Mulani, A. O., & Harale, A. D. IoT Based Smart School Bus and Student Tracking System. *Sanshodhak*, Volume 19, June 2024.
 34. Dhanawadel, A., Mulani, A. O., & Pise, A. C. IOT based Smart farming using Agri BOT. *Sanshodhak*, Volume 20, June 2024.
 35. Mulani, A., & Mane, P. B. (2016). *DWT based robust invisible watermarking*. Scholars' Press.
 36. 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.
 37. 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.
 38. 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.



39. 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.
40. 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.
41. 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.
42. Nagane, U. P., & Mulani, A. O. (2021). Moving object detection and tracking using Matlab. *Journal of Science and Technology*, 6(1), 2456-5660.
43. 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.
44. Ghodake, M. R. G., & Mulani, M. A. (2016). Sensor based automatic drip irrigation system. *Journal for Research*, 2(02).
45. 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.
46. 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.
47. 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.
48. 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).
49. 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.
50. 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 (ICCS)* (pp. 0010-0014). IEEE.
51. 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.
52. 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.
53. 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*.
54. Mulani, A. O., & Shinde, G. N. (2021). An approach for robust digital image watermarking using DWT-PCA. *Journal of Science and Technology*, 6(1).
55. 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.
56. 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.
57. 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.
58. 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.
59. Takale, S., & Mulani, A. (2022). DWT-PCA based video watermarking. *Journal of Electronics, Computer Networking and Applied Mathematics (JECNAM)* ISSN, 2799-1156.



60. Kamble, A., & Mulani, A. O. (2022). Google assistant based device control. *Int. J. of Aquatic Science*, 13(1), 550-555.
61. 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.
62. 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.
63. 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.
64. 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.
65. 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.
66. Gadade, B., & Mulani, A. (2022). Automatic System for Car Health Monitoring. *International Journal of Innovations in Engineering Research and Technology*, 57-62.
67. 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.
68. 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*.
69. 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.
70. 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.
71. 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.
72. Takale, S., & Mulani, D. A. (2022). Video Watermarking System. *International Journal for Research in Applied Science & Engineering Technology (IJRASET)*, 10.
73. Mandwale, A., & Mulani, A. O. (2015, January). Different approaches for implementation of Viterbi decoder. In *IEEE international conference on pervasive computing (ICPC)*.
74. 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.
75. 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.
76. Kambale, A. (2023). Home automation using google assistant. *UGC care approved journal*, 32(1), 1071-1077.
77. 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.
78. 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*.
79. Mandwale, A., & Mulani, A. O. (2016). Implementation of High Speed Viterbi Decoder using FPGA. *International Journal of Engineering Research & Technology, IJERT*.
80. 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.
81. Shinde, R., & Mulani, A. O. (2015). Analysis of Biomedical Image. *International Journal on Recent & Innovative trend in technology (IJRITT)*.



82. Sawant, R. A., & Mulani, A. O. (2022). Automatic PCB Track Design Machine. *International Journal of Innovative Science and Research Technology*, 7(9).
83. 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)*.
84. Gadade, B., Mulani, A. O., & Harale, A. D. (2024). Iot based smart school bus and student monitoring system. *Naturalista Campano*, 28(1), 730-737.
85. 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.
86. Salunkhe, D. S. S., & Mulani, D. A. O. (2024). Solar Mount Design Using High-Density Polyethylene. *NATURALISTA CAMPANO*, 28(1).
87. 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*.
88. 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.
89. 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.
90. 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.
91. Godse, A. P. A.O. Mulani (2009). *Embedded Systems (First Edition)*.
92. 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.
93. 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.
94. 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.
95. 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.
96. 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).
97. 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.
98. Pol, D. R. S. (2021). Cloud Based Memory Efficient Biometric Attendance System Using Face Recognition. *Stochastic Modeling & Applications*, 25(2).
99. Nagtilak, M. A. G., Ulegaddi, M. S. N., Adat, M. A. S., & Mulani, A. O. (2021). Breast Cancer Prediction using Machine Learning.
100. Rahul, G. G., & Mulani, A. O. (2016). Microcontroller Based Drip Irrigation System.
101. 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.
102. Mulani, A., & Mane, P. B. (2016). *DWT based robust invisible watermarking*. Scholars' Press.
103. 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).



104. 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).
105. Altaf Osman Mulani, Electric Vehicle Parameters Estimation Using Web Portal, *Recent Trends in Electronics & Communication Systems*, Volume 10, Issue 3, 2023.
106. 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.
107. 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.
108. 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.
109. 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.
110. 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.
111. 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.
112. 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.
113. 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.
114. 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.
115. 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.
116. 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.
117. 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.
118. 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.
119. 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*.
120. 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.



- 121.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.
- 122.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.
- 123.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.
- 124.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.
- 125.Karande, K. J., & Talbar, S. N. (2014). Independent component analysis of edge information for face recognition. Springer India.
- 126.Karande, K. J., & Talbar, S. N. (2008). Face recognition under variation of pose and illumination using independent component analysis. ICGST-GVIP, ISSN.
- 127.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.
- 128.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.
- 129.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.
- 130.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 its Applications (DICTAP) (pp. 99-103). IEEE.
- 131.
- 132.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>
- 133.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>
- 134.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 (IJPREAMS)*, 05(03), 2427–2433. <https://www.ijprems.com>
- 135.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/IJIRCCE.2018.0604036>
- 136.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>
- 137.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).
138. 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>



139. 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>
140. 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>.
141. 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.
142. 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.
143. 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*.
144. 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.
145. 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.
146. 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.
147. 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.
148. Siddheshwar Gangonda and Prachi Mukherji, “Speech Processing for Marathi Numeral Recognition”, International Conference on Recent Trends, Feb 2012, IOK COE, Pune.
149. S. S. Gangonda, “Bidirectional Visitor Counter with automatic Door Lock System”, National Conference on Computer, Communication and Information Technology (NCCCIT-2018), 30th and 31st March 2018 organized by Department of Electronics and Telecommunication Engineering, SKN SCOE, Korti, Pandharpur.
150. Siddheshwar Gangonda and Prachi Mukherji, “Speech Processing for Marathi Numeral Recognition using MFCC & DTW Features”, ePGCON 2012, 23rd and 24th April 2012 organized by Commins COE for Woman, Pune.
151. 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.
152. Siddheshwar Gangonda and Prachi Mukherji, “Speech Processing for Marathi Numeral Recognition”, ePGCON 2011, 26th April 2011 organized by MAEER's MIT, Kothrud, Pune-38.
153. Siddheshwar Gangonda, “Medical Image Processing”, Aavishkar-2K7, 17th and 18th March 2007 organized by Department of Electronics and Telecommunication Engineering, SVERI's COE, Pandharpur.
154. Siddheshwar Gangonda, “Image enhancement & Denoising”, VISION 2k7, 28th Feb-2nd March 2007 organized by M.T.E. Society's Walchand College of Engineering, Sangli.



155. Siddheshwar Gangonda, "Electromagnetic interference & compatibility" KSHITIJ 2k6, 23rd and 24th Sept. 2006 organized by Department of Mechanical Engineering, SVRI's COE, Pandharpur.
156. 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>
157. 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.
158. 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, 2023 pp: 992-998, 2023.
159. 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.
160. 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.
161. 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.
162. 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.
163. A. C. Pise, et. al., "Python Algorithm to Estimate Range of Electrical Vehicle", Web of Science, Vol 21, No 1 (2022) December 2022
164. 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).
165. 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.
166. 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
167. 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.
168. 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.
169. 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.
170. 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
171. A. C. Pise, et. al., "Adaptive Noise Cancellation in Speech Signal", International Journal of Innovative Engg and Technology, 2017
172. A. C. Pise, et. al., "Lung Cancer Detection System by using Baysian Classifier", ISSN 2454-7875, IJPET, published online in conference special issue VESCOMM-2016, February 2016
173. A. C. Pise, et. al., "Review on Agricultural Plant Diseases Detection by Image Processing", ISSN 2278-621X, IJLTET, Vol 7, Issue 1 May 2016



174. A. C. Pise, et. al. "Segmentation of Retinal Images for Glaucoma Detection", International Journal of Engineering Research and Technology (06, June-2015).
175. A. C. Pise, et. al. "Color Local Texture Features Based Face Recognition", International Journal of Innovations in Engineering and Technology(IJiet) , Dec. 2014
176. 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.
177. 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.
178. 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
179. 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.
180. 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.
181. 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.
182. 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.
183. A. C. Pise, et. al., "Facial Expression Recognition Using Facial Features," IEEE International Conference on Communication and Electronics Systems (ICCES 2018), October 2018.
184. 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.
185. 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.
186. 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.
187. 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.
188. 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.
189. 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.
190. 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
191. A. C. Pise, et. al. "Single Chip Solution For Multimode Robotic Control", Ist IEEE International Conferene on Computing Communication and Automation, 26-27 Feb2015.
192. 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
193. A. C. Pise, P. Bankar, "Face Recognition using Color Local Texture Features", International Conference on Electronics and Telecommunication, Electrical and Computer Engineering, Apr.2014.



194. 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.
195. 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.
196. 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.
197. 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.
198. 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.
199. 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.
200. A. C. Pise, et. al. "Segmentation of Optic Disk and Optic Cup from retinal Images", ICEECMPE – Chennai, June 2015
201. A. C. Pise, et. al. "Diseases Detection of Pomegranate Plant", IEEE Sponsored International conference on Computation of Power, Energy , April 2015.
202. A. C. Pise, et. al. "Compensation Techniques for I/Q Imbalance in Direct-Conversion Receivers", Conference at SCOE, Pune 2010.
203. 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
204. A. C. Pise, et. al. "Compensation Techniques for I/Q Imbalance in Direct Conversion Receiver", Conference at PICT, Pune 2008.
205. A. C. Pise, et. al. "I/Q Imbalance compensation Techniques in Direct Conversion Receiver", Conference at DYCOE, Pune 2008.
206. A. C. Pise, et. al. "DUCHA: A New Dual channel MAC protocol for Multihop Ad-Hoc Networks", Conference at SVCP, Pune 2007.
207. Godase, V., Pawar, P., Nagane, S., & Kumbhar, S. (2024). Automatic railway horn system using node MCU. *Journal of Control & Instrumentation*, 15(1).
208. 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.
209. 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.
210. 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.
211. 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*.
212. Dange, R., Attar, E., Ghodake, P., & Godase, V. (2023). Smart agriculture automation using ESP8266 NodeMCU. *J. Electron. Comput. Netw. Appl. Math*, (35), 1-9.
213. Godase, V. (2025). Optimized Algorithm for Face Recognition using Deepface and Multi-task Cascaded Convolutional Network (MTCNN). *Optimum Science Journal*.
214. Mane, V. G. A. L. K., & Gangonda, K. D. S. Pipeline Survey Robot.
215. 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.
216. Godase, V., & Jagadale, A. (2019). Three element control using PLC, PID & SCADA interface. *International Journal for Scientific Research & Development*, 7(2), 1105-1109.



217. 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.
218. 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.
219. Godase, V. (2025). Comparative study of ladder logic and structured text programming for PLC. Available at SSRN 5383802.
220. 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.
221. Godase, V. (2025). Smart energy management in manufacturing plants using PLC and SCADA. *Advance Research in Power Electronics and Devices*, 2(2), 14-24.
222. 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.
223. Godase, V. (2025). Graphene-Based Nano-Antennas for Terahertz Communication. *International Journal of Digital Electronics and Microprocessor Technology*, 1(2), 1-14.
224. 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.
225. 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.
226. 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.
227. 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.
228. 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.
229. 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.
230. 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.
231. 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.
232. Nagane, M.S., Pawar, M.P., & Godase, P.V. (2022). Cinematica Sentiment Analysis. *Journal of Image Processing and Intelligent Remote Sensing*.
233. Godase, V.V. (2025). Tools of Research. *SSRN Electronic Journal*.
234. Godase, V. (n.d.). EDUCATION AS EMPOWERMENT: THE KEY TO WOMEN’S SOCIO ECONOMIC DEVELOPMENT. *Women Empowerment and Development*, 174–179.
235. 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).
236. 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).
237. Dhope, V. (2024). SMART PLANT MONITORING SYSTEM. In *International Journal of Creative Research Thoughts (IJCRT)*. <https://www.ijcrt.org>



- 238.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>
- 239.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>
- 240.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>
- 241.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.
- 242.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(IJARSCT),ISSN NO:2581-9429 Volume 02 ,Issue 03,DOI 1048175/IJARSCT-3705,IF 6.252, May 2022.
- 243.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
- 244.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
- 245.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
- 246.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
- 247.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
- 248.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
- 249.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.
- 250.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.
- 251.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.
- 252.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.
- 253.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.
254. 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

