

**INTERNATIONAL CONFERENCE on  
RECENT TRENDS IN COMPUTER SCIENCE, TECHNOLOGY,  
DATA SCIENCE AND APPLICATIONS**

**ICRTCTDA-2025**

**7th February  
2025**



**Organized by**

**Department of Computer Science,**

**Department of Computer Applications,**

**Department of Information Technology,**

**Department of Data Science &**

**Department of Mathematics**

**VIDYASAGAR COLLEGE OF ARTS AND SCIENCE  
in association with**

**SRI AANDAL EDUCATIONAL TRUST**



Proceedings of the  
***International Conference on Recent Trends in Computer Science, Technology, Data Science, and Applications (ICRTCTDA-2025)***



**Date: 7<sup>th</sup> February, 2025**

**Venue: Vidyasagar College of Arts and Science, Udumalpet**

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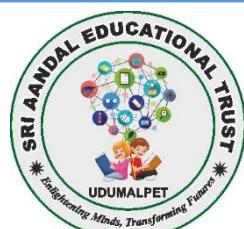
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logistic regression and demonstrates its application in predictive analysis using student data. Through this practical example, the paper highlights the method's utility in identifying relationships and making informed predictions in student educational contexts.

## **ICRTCTDA 2025 -1063**

### **Environmental Impact and Community Health in Navi Mumbai**

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#### **Abstract**

This qualitative research explores the intersection of environmental factors and community health in Navi Mumbai. The study examines air, water, and noise pollution's impact on the residents' well-being, focusing on key environmental stressors and their correlation with health outcomes. The research employs in-depth interviews, focus group discussions, and thematic analysis to derive insights. Recommendations for mitigating adverse impacts and fostering sustainable urban development are discussed.

## **ICRTCTDA 2025 -1064**

### **PLANT LEAF DISEASE DETECTION USING ADAPTIVE FUZZY AND BACK PROPAGATION NEURAL NETWORK (BPNN) BASED CLASSIFICATION**

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#### **Abstract**

Agriculture has a major role in the growth and development of every nation's economy. The productivity of the agriculture industry is impacted by the advent of multiple plant-related illnesses. Plant disease detection is important for managing this problem, educating farmers about preventing illnesses from spreading, and implementing efficient management practices. Agriculture continues

to be the principal employment sector with a small percentage of the workforce despite its steadily declining contribution due to population growth. Therefore, the pace of competitive, productive, varied, and sustainable agriculture needs to be accelerated. Plant leaf damage results from incorrect pesticide selection that is frequently caused by misinterpretations of plant leaf diseases. For this reason, from the perspective of the farmer, automatic disease detection at an early stage is both significant and cost-effective. For this, proper segmentation of diseased part from the plant leaf in an accurate way is of utmost importance to diagnose the disease at earlier stage. But, its accurate detection has become a challenging task due to presence of noise in the digitally captured image, variation in background, shape and brightness in diseased images. Although numerous approaches have already been employed for this aim by researchers, other approaches connected to vision remain unexplored. Mean, Median, and Gaussian, image pre-processing methods like filtering the unwanted noise, and deep structured learning methods like neural networks are among the frequently employed techniques. We have created a new method that combines Adaptive Type 2 Fuzzy technique with Back Propagation Neural Networks to classify and detect plant leaf diseases. Our findings were derived from a dataset of village plant leaf images and leaf images from kaggle website were used as the training dataset. And also we are taking some leaf images for testing dataset. Different types of agricultural plant leaf diseases have been examined. Using photos of the leaves, the suggested system was trained to identify the leaf disease. In our suggested study, the suggested architecture improved plant leaf disease prediction to overall efficiency. Using this proposed Adaptive Type 2 Fuzzy filtering technique, we achieved the output result of MSE of 40.15, PSNR of 38.55, Correlation of 0.968, with the 26.78 milliseconds time duration of prediction which is superior to the other traditional approaches such as Mean, Media, Gaussian methods.

## ICRTCTDA 2025 -1065

### A Study of Education Loans of SBI Bank in Kalyan Branch

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#### Abstract

This study focuses on analyzing the education loan offerings of State Bank of India (SBI) at the Kalyan Branch, examining key aspects such as eligibility criteria, documentation requirements, interest rates comparison with HDFC bank, and disbursement procedures. Education loans play a