

ICRTME25-172

**Predictive Modelling and Analysis of Crime Using
Machine Learning**Vijitha S¹, Shyam Saran K², Ramya V³*Department of Computer Science Engineering, Vels Institute of Science and
Technology, Chennai, India*

Corresponding author E-mail: vr5552006@gmail.com

ABSTRACT

This project focuses on predicting and analyzing crime using machine learning techniques. Crime data is collected from police records and public sources and processed using classification algorithms such as Random Forest, Decision Tree, and Logistic Regression to identify crime patterns and predict future crime hotspots. Mechanical engineering contributes by developing wearable mechatronic devices and flexible biosensors that capture real-time human activity, motion tracking, and physiological signals like stress levels. These devices provide valuable data for the system to detect abnormal behavior and enhance the accuracy of crime prediction. The system offers interactive dashboards and real-time alerts to help law enforcement agencies make data-driven decisions, improving public safety and crime prevention strategies.

Keywords: Machine Learning, Data Mining, Mechatronic Wearables, Biosensors, Human Activity Recognition, Real-Time Data Acquisition



978-81-992034-1-9

**DEPARTMENT OF MECHANICAL ENGINEERING
VISTAS, CHENNAI, INDIA**