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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

CRIME PREDICTION USING A MACHINE LEARNING ALGORITHM

CONCLUSION:

crime prediction system that uses a variety of machine learning algorithms to forecast the type of crime most likely to occur at a specific location and time. The system aims to help law enforcement agencies with proactive crime prevention and resource allocation by analyzing historical crime data, including factors like location, time, crime type, and frequency. The platform integrates multiple classifiers, such as Decision Trees, Random Forests, Support Vector Machines, and neural networks, to provide a more nuanced understanding of criminal activity than traditional methods. The results are then visualized using tools like heat maps to highlight high-risk areas.

The paper also compares various machine learning models used in crime prediction and outlines their advantages and disadvantages. The proposed system, by using ensemble methods and advanced algorithms, has shown significant improvements in accuracy, with some models achieving up to 99.5% accuracy during testing.

The system is designed to be user-friendly, offering a more precise and actionable tool for law enforcement and urban planners compared to earlier systems. Overall, the study demonstrates the potential of leveraging advanced technology to enhance crime forecasting, enabling smarter and more effective policing strategies.

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