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Website Development of Crime Management System

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ABSTRACT:

The increasing penetration of online systems provides an excellent opportunity to utilize digital tools for personal and public safety. The City Without Crime (CWC) project introduces a web-based platform aimed at modernizing crime management processes. This platform allows citizens to register complaints online, report missing individuals, access details about most-wanted criminals, and receive updates about crimes and public safety.

The system's architecture relies on a MySQL server for database management and employs JAVA and HTML for creating dynamic and responsive interfaces. The software is designed to support efficient communication between citizens and law enforcement agencies, enabling the latter to process complaints swiftly and update their statuses in real time. The system also tackles challenges like bribery and manipulation in manual record-keeping by centralizing data and ensuring transparency.

By automating and digitizing crime management processes, this system addresses the inefficiencies of traditional manual systems and lays the foundation for a more secure and responsive public safety infrastructure.

Keywords: Crime Management, Java, System

1. Introduction

In recent years, there has been a notable surge in the number of people relying on online systems, driven by the rapid advancement of digital technology and increased accessibility to the internet. As a result, various online facilities have emerged, not only for convenience but also as a measure to enhance personal and public safety. With crime rates rising in numerous urban areas, the necessity of reliable and accessible security systems has grown in tandem, prompting the development of web-based applications dedicated to public safety. The project "City Without Crime" (CWC) was conceptualized to meet this need by providing a comprehensive, web-based crime management platform. This software enables a more efficient approach to crime reporting, monitoring, and management, benefiting both the public and law enforcement agencies.

The CWC system offers a suite of tools aimed at streamlining the process of crime reporting and resolution. Citizens can utilize the application to report crimes online, submit complaints, report missing persons, view details of most-wanted individuals, access news related to public safety, and even engage in direct communication with police personnel. The platform's user-friendly interface is designed to simplify these interactions, making it easier for the public to report incidents without the need to physically visit a police station. Furthermore, CWC empowers the police by allowing them to manage crime reports digitally, organize case data, and respond to complaints promptly. The digital shift from manual processes to a web-based system provides police officers with a powerful tool for crime monitoring and response management. Each officer is provided with a secure login by the system administrator, ensuring authorized access to the platform and safeguarding the data against unauthorized breaches.

The system's backend is powered by the XAMPP server, which serves as a temporary data repository, allowing smooth data handling and process management. Built using fundamental web technologies like HTML and PHP, CWC represents an accessible and scalable solution that doesn't require highly complex infrastructures. Its web-based nature also ensures that any user with internet access can connect to the server, authenticate themselves, and access relevant features based on their role—whether they are members of the public reporting a crime or police officers managing cases.

As we look towards the future, systems like CWC present new possibilities in public safety management. They pave the way for a digital infrastructure that can revolutionize the way law enforcement and citizens interact, facilitating a more responsive and efficient approach to crime control. While the current iteration of the platform addresses fundamental needs, it also opens up a dialogue on further developments, challenges, and opportunities in using digital platforms to foster safer communities

2. Literature

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Ensuring women's safety in smart cities is a need of the hour. Even though several legal and technological steps are adopted worldwide, women's safety continues to be an international concern. Criminal records are maintained by law enforcement agencies and are most often not available to the public in an easily comprehensible form. While some wearable devices and mobile applications are available which are touted to aid in ensuring women's safety, they utilize limited societal intervention and are not very efficient in ensuring the safety of the women as and when required. Most often the crime response, crime analysis, and crime prevention schemes are not integrated, leading to gaps in ensuring women's safety. Our major contribution is in developing a holistic system encompassing the three crucial aspects, i.e crime analysis and mapping, crime prevention, and emergency response by leveraging societal participation for women safety management. This work applies the Geographic Information System (GIS) for the identification of hotspots and patterns of crime. The proposed system uses data generated from the mobile application and/or wearable gadget prototyped as a part of this work along with the criminal history records for crime response, analysis, and prevention. The system for the hotspot identification is demonstrated for the Pilani town in the Jhunjhunu district in the state of Rajasthan, India, and can be easily scaled up geographically and utilized as a safety strategy for smart cities. While the common man is provided a cost-effective solution via the developed mobile application or wearable gadget, the various components are integrated into a website for supervisory management and can be utilized by law enforcement agencies.

Author: XINGE HAN 1 , XIAOFENG HU1 , HUANGGANG WU2 , BING SHEN1 , AND JIANSONG WU3

Urbanization has been speeding up social and economic transformations in urban communities, the smallest social units in a city. However, urbanization brings challenges to urban management and security. Therefore, a system of risk prediction of crimes may be essential to crime prevention and control in urban communities and its system improvement. To tackle crime-related problems in urban communities, this paper proposes a model of daily crime prediction by combining Long Short-Term Memory Network (LSTM) and Spatial-Temporal Graph Convolutional Network (ST-GCN) to automatically and effectively detect the high-risk areas in a city. Topological maps of urban communities carry the dataset in the model, which mainly includes two modules — spatial-temporal features extraction module and temporal feature extraction module — to extract the factors of theft crimes collectively. We have performed the experimental evaluation of the existing crime data from Chicago, America. The results show that the integrated model demonstrates positive performance in predicting the number of crimes within the sliding time rang

3. Proposed System

The City Without Crime (CWC) system addresses these gaps by automating and digitizing crime management processes. The key improvements include:

Time Efficiency: Online complaint registration and tracking reduce delays, enabling faster responses to incidents.

Error Reduction: By automating data entry and storage, the chances of human errors are minimized.

Transparency and Accountability: Centralized databases ensure that all records are securely stored and accessible only to authorized personnel, reducing opportunities for data manipulation.

Real-Time Communication: The system allows citizens to receive updates on their complaints and interact directly with law enforcement agencies.

Accessibility for All Users: With a user-friendly interface, the platform is designed for users with varying technical skills, ensuring widespread adoption.

Cost-Effectiveness: Automation reduces the reliance on human resources, lowering operational costs in the long run.

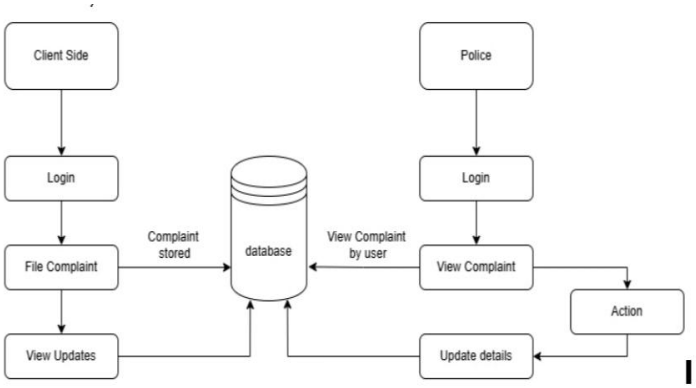


Figure 1. System Architecture

4. Application

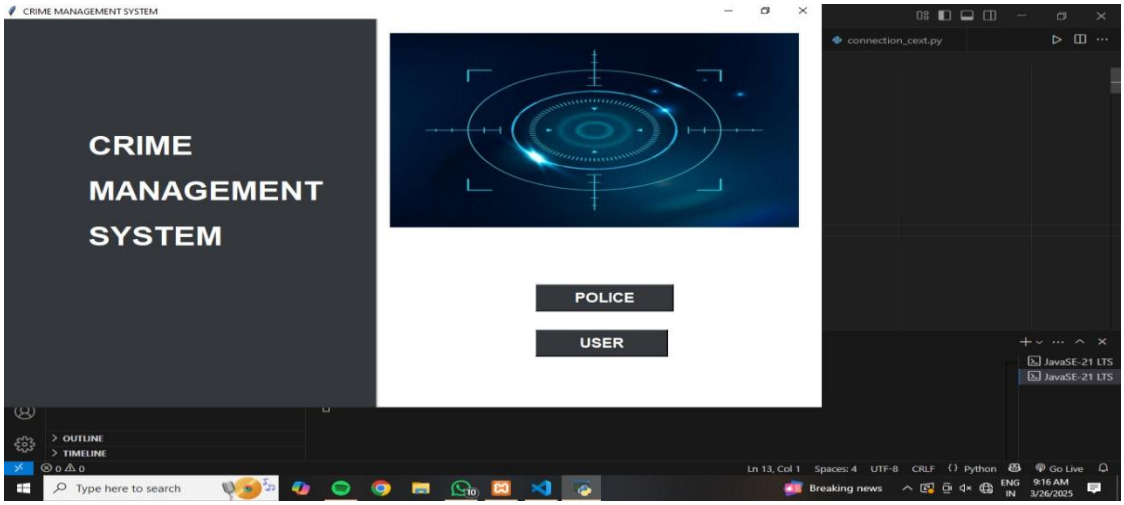
Allows citizens to file complaints and report incidents online, making crime reporting more accessible and efficient, especially for those unable to visit a police station. Facilitates the management and tracking of cases for police officers, enabling them to organize complaints, update statuses, and prioritize cases effectively.

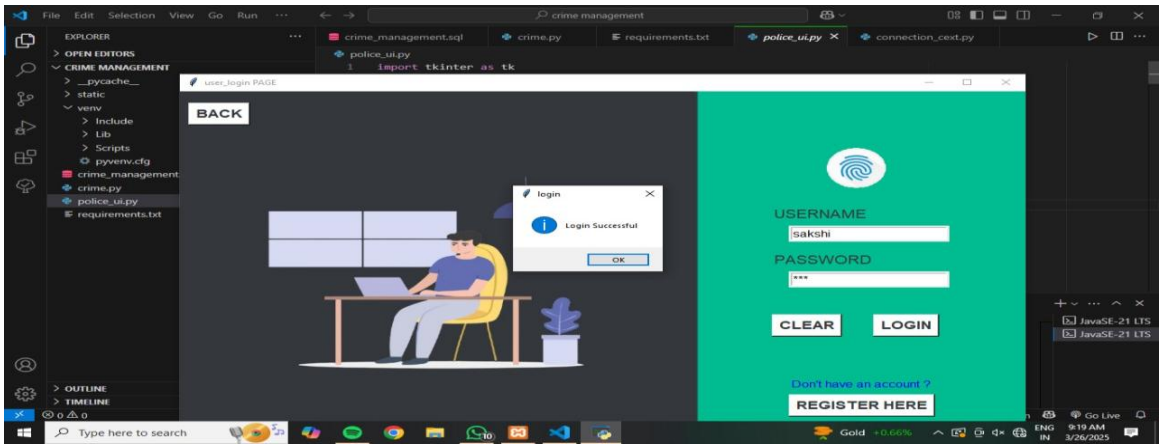
Provides a searchable database for reporting and viewing details of missing persons, helping law enforcement and the public in locating missing individuals.

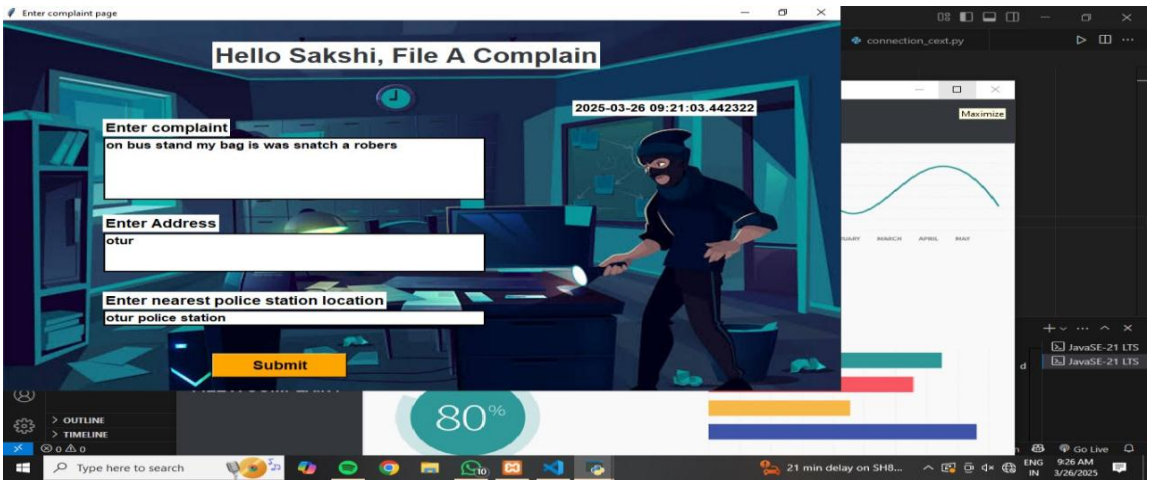
Allows the public and police to view profiles of most-wanted criminals, aiding in public awareness and supporting community policing efforts. Time Crime Data Analysis:

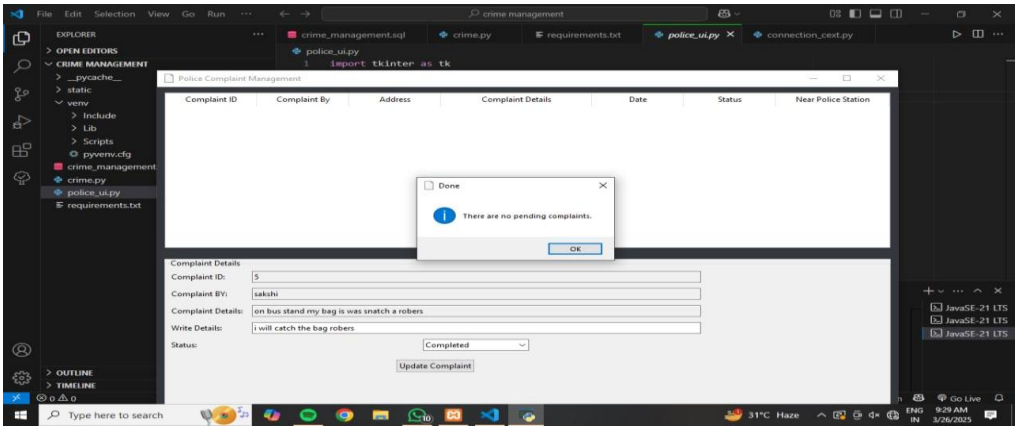
Helps law enforcement agencies identify crime hotspots, patterns, and trends

4. Result









6. Conclusion:

The City Without Crime (CWC) platform represents a significant step forward in modernizing crime management systems. By addressing the inefficiencies of traditional manual processes, the application enhances the speed, accuracy, and reliability of crime reporting and tracking. It empowers citizens by giving them direct access to law enforcement services and fosters a more transparent relationship between the public and the police.

This system reduces manual workload, minimizes human errors, and provides a centralized database for better record-keeping and analysis. As a result, it ensures a safer environment for citizens while improving the operational efficiency of law enforcement agencies.

Future Scope: The system has immense potential for growth. Features such as biometric authentication, facial recognition, and real-time data analytics can be integrated to further enhance its capabilities. By continuously evolving and adopting the latest technologies, the City Without Crime (CWC) can serve as a model for crime management systems worldwide.

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