Patent Search

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Abstract:

ABSTRACT This invention represents a transformative approach to crime prediction and urban safety, harnessing the power of traditional machine learning models. L algorithms such as Logistic Regression, Decision Trees, and Random Forests, our system offers accurate and interpretable crime risk assessments, enabling proactive reduce criminal activities.Our innovation excels in resource allocation, ensuring efficient deployment of law enforcement personnel and resources. By identifying ano outliers in crime data, our solution empowers law enforcement agencies to take preemptive actions, thereby enhancing public safety.Urban areas grappling with rapi urbanization benefit from our specialized techniques. Spatial analysis, feature selection, and ensemble-based machine learning empower cities to identify high-risk c and anticipate crime trends.This invention drives data-driven decision-making in law enforcement and urban management, offering insights into crime patterns and i factors. It equips decision-makers with the tools needed to create safer communities, revolutionizing crime prediction and urban safety enhancement.

Complete Specification

Description:FIELD OF THE INVENTION

The field of crime risk forecasting has witnessed a transformative revolution with the integration of Artificial Intelligence (AI) and Machine Learning (ML) techniques. innovations have ushered in a new era of predictive policing, where law enforcement agencies can proactively allocate resources and mitigate potential criminal act this article, we explore the innovative techniques in ML and AI that have reshaped the landscape of crime risk forecasting, along with the methods used to make the predictions more accurate and actionable.Techniques of Machine Learning and Artificial Intelligence .Data-Driven Insights Supervised Learning: One of the fundame techniques used in crime risk forecasting is supervised learning. Algorithms are trained on historical crime data, with features such as time, location, demographics, weather conditions.

These models can then make predictions about the likelihood of future criminal events. Common algorithms include decision trees, random forests, and support ve machines.Deep Learning: Neural networks, a subset of ML, are powerful tools for crime prediction due to their ability to discover intricate patterns in data. Convolu Neural Networks (CNNs) and Recurrent Neural Networks (RNNs) can be employed to analyze complex spatial and temporal relationships in crime data, making ther suited for tasks like image-based surveillance and time-series analysis.

Geospatial Intelligence (GIS) Spatial Analysis Geographic Information Systems (GIS) play a pivotal role in crime risk forecasting. Spatial analysis involves mapping cri

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