لبيب حسين جواد
Dr. Mohammad Jawad Supervisor

Crime prediction based machine learning

Abstract

Predicting crime using machine learning and deep learning techniques has gained considerable attention from researchers in recent years, focusing on identifying patterns and trends in crime occurrences. This review paper examines over 150 articles to explore the various machine learning and deep learning algorithms applied to predict crime. The study provides access to the datasets used for crime prediction by researchers and analyzes prominent approaches applied in machine learning and deep learning algorithms to predict crime, offering insights into different trends and factors related to criminal activities. Additionally, the study highlights potential gaps and future directions that can enhance the accuracy of crime prediction. We develop a model to predict future crime incidence at a future time given a geographical location, leveraging historical crime data from the cities of Boston, Chicago, and San Francisco. We take a Decision tree and random forest algorithms to the problem of interpolation on crime data from these cities. We compare these models to current baseline approaches which consists of linear regression on crime data, partitioned by region.