

Project Design Phase

Solution Architecture

Date	23/10/23
Team ID	591762
Project Name	Crime vision :Advanced crime classification with deep learning

Solution Architecture:

The proposed solution architecture for an AI crime classification system using deep learning follows a supervised learning approach, where a deep neural network is trained to predict the type of crime based on diverse features such as location, time, and crime characteristics. This architecture comprises several key stages. It initiates with the collection and preprocessing of crime data from various sources, followed by the crucial step of data labeling, associating each entry with its respective crime type. Feature extraction is then employed to derive relevant input attributes for the neural network, allowing it to discern patterns and relationships in the data. The heart of the system lies in the deep learning model, which is trained on the labeled dataset. Subsequently, rigorous evaluation ensures the model's accuracy and effectiveness, leading to its deployment within law enforcement agencies for real-time or batch crime classification tasks. Importantly, a feedback loop is integrated to continually improve the model's performance, adapt to evolving crime patterns, and accommodate new data sources or features. This scalable and modular architecture empowers law enforcement to enhance the precision and efficiency of crime classification, ultimately contributing to more effective crime resolution and safer communities.

Example - Solution Architecture Diagram:

