

## Project Design Phase-I

### Solution Architecture

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Team ID	NM2023TMID2133
Project Name	Project - - CrimeVision: Advanced Crime Classification with Deep Learning

#### Solution Architecture:

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed, and delivered.

Data flow involved in an advanced crime classification system with deep learning:

- Crime scene evidence and suspect data are collected and fed into a data pipeline for cleaning, normalization, and transformation.
- The pre-processing and feature extraction component extracts meaningful features from the data that can be used as inputs to a deep learning model.
- The deep learning model is trained on a labeled dataset to identify patterns and relationships in the data, and then deployed to a model serving component for real-time inference and scoring of new data.
- The analytics and reporting component provides insights and visualizations on crime trends, patterns, and other relevant metrics.

Overall, this solution architecture is designed to support the development and deployment of deep learning models for crime classification, enabling law enforcement agencies to more accurately and efficiently identify and apprehend criminals.

**Solution Architecture Diagram:**

