Project Design Phase-I
Solution Architechture

Date	23 October 2023
Team ID	592787
Project Name	Crime Vision: Advanced Crime Classification With Deep Learning
Maximum Marks	4 Marks

Solution Architechture:

The Crime Vision system, which aims to classify and categorize crimes using deep learning, comprises several stages, each employing specific technologies and APIs. The architecture can be broken down into the following stages:

Developer

Data Ingestion:
Video surveillance feeds.
Incident reports in various formats.

Data Preprocessing:
Data cleaning & formatting.
Video stream analysis
Tech and APIs:
OpenCV video processing.
NLTK for text preprocessing.

Deep Learning Models
TensorFlow for model development.
CNNs for image analysis.
RNNs for text analysis.

Real-time Classification:
Flask for developing RESTful API endpoints

User Interface:
frontend development.
GraphQL for efficient data retrieval.
Mapbox API for geospatial visualization.

Data Security and Privacy:
Encryption and hashing algo.
ACLs for user permissions.
OAuth 2.0 for authentication.

Scalability & Infrastructure:
AWS for cloud-based infrastructure
CloudWatch for monitoring

Integration with Existing System

Optimization & Continuous Improvement

Mobile Compatibility

Global Scalability