Project Initialization and Planning Phase

Date	15 April 2024
Team ID	738181
Project Title	CRIME VISION: ADVANCED CRIME CLASSIFICATION WITH DEEP LEARNING.
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

This project proposal outlines a solution to address a specific problem. With a clear objective, defined scope, and a concise problem statement, the proposed solution details the approach, key features, and resource requirements, including hardware, software, and personnel.

Project Overview	
Objective	The primary objective of this project is to develop and implement an advanced crime classification system leveraging deep learning techniques to improve the accuracy and efficiency of crime categorization and management.
Scope	The scope of this project encompasses the development, testing, and deployment of the crime classification system. It includes the design and implementation of deep learning algorithms, integration with existing law enforcement systems, and user training and support.
Problem Statement	
Description	Law enforcement agencies face significant challenges in accurately categorizing and managing criminal incidents due to the limitations of traditional classification methods. Manual processes are time-consuming, prone to errors, and often result in inconsistencies in crime reporting.
Impact	The inefficiencies in current crime classification systems lead to delays in investigations, misallocation of resources, and compromised public safety. By addressing these challenges, the proposed solution aims to enhance the effectiveness and responsiveness of law enforcement operations.

Proposed Solution	
Approach	The proposed solution will leverage advanced deep learning techniques to automate and optimize the crime classification process. It will involve the development of Deep Learning models trained on large datasets of labeled crime data to accurately classify and prioritize criminal incidents.
Key Features	Real-time monitoring and analysis of criminal activities to enable proactive intervention and crime prevention. Integration with existing law enforcement databases and systems for seamless data sharing and collaboration. Utilization of various Deep Learning models like DenseNet121, VGG16, Xception & ResNet50 to analyze crime data.

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	Intel Core i5 12th Gen
Memory	RAM specifications	12 GB
Storage	Disk space for data, models, and logs	512 GB SSD
Software		
Frameworks	Python frameworks	Flask
Libraries	Additional libraries	Tensorflow, Keras, pandas, numpy, matplotlib, sklearn, cv2, seaborn, OS,
Development Environment	IDE, version control	Google Colab, Anaconda (Spyder)

Data		
Data	Source, size, format	SmartInterz Platform (Kaggle), 12GB, PNG Classification Images