Project Initialization and Planning Phase

Date	18 June 2024
Team ID	739634
Project Title	Flight Delays Prediction Using Machine Learning
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) report

This report outlines a project to analyze historical flight delay data, develop a predictive model for forecasting delays, and provide actionable insights to airlines and airports. The project aims to enhance operational efficiency and improve the passenger experience.

Project Overview	
Objective	1.Minimizing disructions to airline schedules and operations. 2.Enhancing passengers experience by reducing wait times and inconvenience. 3.Optimizing resource allocation and operational efficiency to control costs.
Scope	The project comprehensively assesses and enhances airline operations by predicting and managing flight delays,incorporating machine learning for more robust and efficient system
Problem Statement	
Description	Addressing inaccuracies and inefficiencies in the current flight delay prediction system adversely affects operational efficiency and passenger satisfaction.
Impact	Solving these issues will result in improved operational efficiency, reduced risks, and an overall enhancement in the lending process, contributing to customer satisfaction and organizational success.
Proposed Solution	
Approach	Employing machine learning techniques to analyze and predict flight delays, creating a dynamic and adaptable airline operation system.

Resource Requirements

Hardware		
Computing Resources	CPU/GPU specifications, number of cores	T4 GPU
Memory	RAM specifications	8 GB
Storage	Disk space for data, models, and logs	1 TB SSD
Software		
Frameworks	Python frameworks	Flask
Libraries	Additional libraries	scikit-learn, pandas, numpy, matplotlib, seaborn
Development Environment	IDE	Jupyter Notebook, visual studio
Data		
Data	Source, size, format	Kaggle dataset, 11231× 26, csv dataset