Project Initialization and Planning Phase

Date	15 March 2024
Team ID	SWTID1720452383
Project Title	Ecommerce Shipping Prediction Using Machine Learning
Maximum Marks	3 Marks

Project Proposal

The objective of this project is to develop a machine learning model that accurately predicts shipping times for ecommerce orders. By analyzing historical shipping data, order details, and external factors such as weather and traffic conditions, we aim to optimize delivery estimates. This will enhance customer satisfaction, reduce shipping costs, and streamline logistics. Our approach will involve data collection, preprocessing, feature engineering, model training, and evaluation. The final model will be integrated into the ecommerce platform to provide real-time shipping predictions.

Project Overview	
Objective	Develop a machine learning model to accurately predict shipping times for ecommerce orders.
Scope	Develop, evaluate, and integrate a machine learning model for real-time shipping time predictions in an ecommerce platform, encompassing data collection, preprocessing, feature engineering, and continuous maintenance.
Problem Statement	
Description	Ecommerce businesses struggle with inaccurate shipping time predictions due to various dynamic factors, leading to customer dissatisfaction and logistical inefficiencies.
Impact	Accurate shipping predictions will enhance customer satisfaction, reduce operational costs, and improve overall logistics efficiency for ecommerce businesses.
Proposed Solution	
Approach	Develop a machine learning model using historical data and external factors, ensuring accurate real-time shipping predictions through data preprocessing, feature engineering, model training, evaluation, integration, and continuous monitoring.
Key Features	Real-time shipping predictions, dynamic data integration (weather, traffic, etc.), scalable model, user-friendly interface, and continuous performance monitoring.

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	Intel(R) Core(TM) i5-6200U CPU,2 cores
Memory	RAM specifications	8 GB
Storage	Disk space for data, models, and logs	256GB SSD

Software		
Frameworks	Python frameworks	Flask
Libraries	Additional libraries	Tensorflow
Development Environment	IDE, version control	Jupyter Notebook, Git
Data		
Data	Source, size, format	Kaggle dataset, 440 kb train.csv