Project Initialization and Planning Phase

Date	20 JUNE 2024
Team ID	SWTID1720196555
Project Title	Ecommerce Shipping Prediction Using Machine 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 an accurate ecommerce shipping prediction system that estimates whether a product will be delivered on time, thereby enhancing customer satisfaction and improving the overall customer experience
Scope	The project will focus on creating a machine learning-based prediction system that integrates with popular ecommerce platforms like Shopify and Magento. The system will provide real-time updates, consider various external factors such as weather and traffic, and be scalable to handle large volumes of orders.
Problem Statement	
Description	Customers and ecommerce businesses often face frustration due to inaccurate delivery time predictions. This leads to dissatisfaction, reduced trust, and inefficiencies in managing delivery estimates.
Impact	Solving this problem will enhance customer satisfaction by providing reliable delivery information, improve trust in ecommerce services, and reduce the operational burden on businesses by automating and accurately predicting delivery times.

Proposed Solution	
Approach	We will utilize machine learning models to predict delivery times based on historical data and real-time updates. The system will consider factors such as distance, traffic, weather, and carrier performance. Integration with ecommerce platforms will automate order information retrieval and provide real-time updates to customers.
Key Features	**Accurate Predictions:** Use of machine learning models to predict on-time delivery considering various factors. **Real-Time Updates:** Continuous updates on delivery status and dynamic adjustment of estimated delivery times. **Platform Integration:** Seamless integration with popular ecommerce platforms like Shopify and Magento. **Scalability:** Ability to handle large volumes of orders and provide quick and accurate delivery estimates.

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	Intel Core i5-8250U Processor, 4 cores, 8 threads, up to 3.4 GHz
Memory	RAM specifications	8 GB
Storage	Disk space for data, models, and logs	1 TB SSD

Software		
Frameworks	Python frameworks	Flask
Libraries	Additional libraries	Numpy,Pandas,Matplotlib,Seaborn,HTML,Python-Flask
Development Environment	IDE, version control	Jupyter Notebook, Git,jupyter
Data		
Data	Source, size, format	Kaggle dataset