Project Initialization and Planning Phase

Date	7 JULY 2024
Team ID	SWTID1720108776
Project Title	Ecommerce Shipping Prediction Using Machine Learning
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

The project aims to provide significant benefits to the e-commerce business and its customers, fostering a more reliable, efficient, and customer-friendly shipping process. By leveraging advanced machine learning techniques, the project seeks to enhance the reliability and precision of shipping time predictions, ultimately leading to improved customer satisfaction and operational efficiency.

Project Overview	
Objective	The primary objective of the Ecommerce Shipping Prediction Using Machine Learning project is to develop an accurate and reliable predictive model for estimating the delivery time of e-commerce orders
Scope	The scope outlines the comprehensive approach required to successfully implement and maintain an effective machine learning model for predicting e-commerce shipping times with dynamic and real-life factors, thereby driving operational efficiency and enhancing customer satisfaction. This can be integrated into many Ecommerce applications, predict with best accuracy.
Problem Statement	
Description	Predicting shipping times accurately is a complex task influenced by various factors such as order volume, shipping distance, carrier performance, weather conditions, and operational delays. Inaccurate delivery estimates can lead to customer dissatisfaction, increased customer service costs, and logistical inefficiencies.

Impact	E-commerce businesses can enhance their shipping processes, leading to improved customer satisfaction, operational efficiency, and overall business performance. Investing in technologies and strategies that optimize shipping is essential for maintaining a competitive edge in the dynamic e-commerce landscape.

Proposed Solution	
Approach	Employing machine learning classification techniques to analyse and predict creditworthiness, creating a dynamic and adaptable shipping. Classification Algorithms should be used, chose best model and thereby saving the model and deploying the model through flask
Key Features	-Implementation of a machine learning-based credit assessment model. -Flask deployment for easy access. -Order-Related Features. -Customer-Related Features. -Shipping Carrier Features.

Resource Requirements

Resource Type	**Description**	**Specification/Allocation**
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	2 x NVIDIA V100 GPUs
Memory	RAM specifications	8 GB
Storage	Disk space for data, models, and logs	1 TB SSD
Software		
Frameworks	Python frameworks	Flask
Libraries	Additional libraries	Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn

Development Environment	IDE, version control	Jupyter Notebooks, PyCharm, or VS Code.
Data		
Data	Source, size, format	Kaggle dataset URL: https://www.kaggle.com/datasets/prachi13/customer-analytics?select=Train.csv Size: 124KB Rows: 10999, Columns: 12