# Project Initialization and Planning Phase

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| Date | 15 June 2024 |
| Team ID | SWTID1720434734 |
| Project Title | Ecommerce shipping prediction using ML |
| Maximum Marks | 3 Marks |

## Project Proposal (Proposed Solution) template

Ecommerce shipping prediction is the process of estimating the whether the product reached on time. which is based on various factors such as the origin and destination of the package, the shipping method selected by the customer, the carrier used for shipping, and any potential delays or issues that may arise during the shipping process. Machine learning models can be used to make accurate predictions about shipping times based on historical data and real-time updates from carriers.

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| **Project Overview** | |
| Objective | To develop an advanced shipping prediction system for e-commerce platforms that provides accurate delivery times by considering real-time factors |
| Scope | Integration with existing e-commerce platforms.<br>Real-time data collection and processing from various sources.<br>Prediction model development and implementation. |
| **Problem Statement** | |
| Description | E-commerce customers rely on promised delivery dates for their online purchases to plan their schedules and meet their needs. However, frequent delays and inaccurate delivery times disrupt these plans, causing frustration |
| Impact | Enhanced customer satisfaction and trust in the e-commerce platform. Increased customer retention and repeat purchases, improved operational efficiency for e-commerce businesses. Better resource management and logistics planning. |
| **Proposed Solution** | |
| Approach | Data Collection, Data Processing, Model Development, Integration, Testing and Validation |

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| Key Features | Real-time tracking and updates for customers. Accurate delivery time predictions considering various dynamic factors. Alerts and notifications for potential delays. |

**Resource Requirements**

| Resource Type | Description | Specification/Allocation |
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| **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, version control | Google Colab |
| **Data** | | |
| Data | Source, size, format | Kaggledataset, 431, csv |