Project Title: Predictive Maintenance for International Delivery Fleet

Objective Statement:
The objective of this project, following the PACE framework (Plan, Analyze, Construct, Execute), is to develop a machine learning model for predictive maintenance on the international delivery company's fleet of vehicles. The goal is to optimize vehicle performance, increase safety, improve customer service, and reduce operational costs by proactively identifying and addressing issues. The project timeline is set for 12 weeks, with a target of building a model with at least 90% accuracy.

Key Tasks and Deliverables:

1. Plan (Weeks 1-2): Data Collection
- *Task:* Identify and gather historical performance and maintenance records.
- *Deliverable:* Comprehensive dataset containing relevant historical data.

- *Task:* Implement a real-time data collection system from sensors on delivery vehicles.
- *Deliverable:* Real-time data stream integrated into the data infrastructure.

- *Time Estimate:* 2 weeks

2. Analyze (Weeks 3-4): Data Cleaning
- *Task:* Clean and preprocess historical and real-time data to ensure quality and consistency.
- *Deliverable:* Cleaned dataset ready for exploration and modeling.

- *Time Estimate:* 2 weeks

3. Analyze (Weeks 5-6): Data Exploration
- *Task:* Conduct exploratory data analysis to understand patterns, trends, and correlations in the data.
- *Deliverable:* Data exploration report highlighting key insights.

- *Time Estimate:* 2 weeks

4. Construct (Weeks 7-10): Building and Testing of ML Models
- *Task:* Develop and train machine learning models using the cleaned dataset.
- *Deliverable:* Trained models capable of predicting equipment failures.

- *Task:* Test the models for accuracy and fine-tune parameters for optimal performance.
- *Deliverable:* Finalized machine learning models with a minimum accuracy of 90%.

- *Time Estimate:* 4 weeks

5. Execute (Weeks 11-12): Sharing Results/Insights with Stakeholders

- *Task:* Prepare a comprehensive report on model performance, insights gained, and potential impact on predictive maintenance.
- *Deliverable:* Presentation and documentation for stakeholders.

- *Time Estimate:* 2 weeks

Project Timeline:
- **Weeks 1-2:** Data Collection
- **Weeks 3-4:** Data Cleaning
- **Weeks 5-6:** Data Exploration
- **Weeks 7-10:** Building and Testing of ML Models
- **Weeks 11-12:** Sharing Results/Insights with Stakeholders

Note: The timeline follows the PACE framework, allowing for a systematic and structured approach to meet the 12-week project goal of building a predictive maintenance model with a minimum accuracy of 90%. Regular checkpoints and collaboration will be maintained within the data team and with stakeholders to ensure project success.