🚦 Project Design Phase: Problem – Solution Fit

Date: 17 July 2025
Team ID: LTVIP2025TMID45340
Project Name: Traffic Volume Estimation
Maximum Marks: 2 Marks

◆ Problem

Urban commuters and traffic authorities struggle with unpredictable traffic conditions.

- **Commuters:** Face delays, frustration, and inefficiency due to a lack of accurate, timely traffic volume information.

- **Traffic authorities:** Find it difficult to manage congestion effectively without reliable real-time traffic data.

◆ Solution

Our machine learning-based *Traffic Volume Estimation* model:
✅ Predicts traffic volume based on historical and live data
✅ Helps commuters plan routes more effectively
✅ Provides actionable insights for traffic authorities to manage flow
✅ Delivered through a lightweight Flask web app or API

◆ Fit

✅ The solution directly addresses the customer pain points identified.
✅ Early testing shows that predictions align well with actual traffic patterns.
✅ The solution integrates easily with platforms commuters and authorities already use (e.g., maps, dashboards).
✅ Designed to be scalable and extensible with additional data (weather, events).

◆ Purpose (as per template)

- Solve complex problems by aligning with customer needs

- Enable faster success and greater adoption by fitting into customer behaviors

- Improve communication strategies by addressing real frustrations

- Build trust through a solution that targets urgent, frequent, and costly issues

- Understand and enhance the current situation for both commuters and authorities