Project Design Phase
Problem – Solution Fit Template

Date	28 June 2025
Team ID	LTVIP2025TMID40870
Project Name	TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning.
Maximum Marks	2 Marks

Problem – Solution Fit Template:

The core problem faced by commuters and traffic authorities is the unpredictability of traffic, which leads to delays, frustration, and inefficient road usage. Traditional methods are often reactive and lack predictive capabilities. *TrafficTelligence* addresses this issue by providing a machine learning-powered web application that predicts traffic volume based on time and weather inputs. This solution fits naturally into user behavior, requires no expensive infrastructure, and offers data-driven insights. By aligning with user needs and daily routines, it effectively solves a real and recurring problem with a practical and scalable approach**.**

Purpose:

- **Solve real-world traffic problems** by providing predictive insights into vehicle volume using machine learning models tailored to user behavior and data patterns.
- **Enhance user adoption and satisfaction** by integrating a simple, accessible web interface that aligns with daily commuter routines and decision-making processes.
- **Improve communication and planning** by delivering accurate traffic predictions that reduce uncertainty and help users make informed travel choices.
- **Build trust and engagement** by solving frequently encountered traffic issues through a reliable, data-driven system that minimizes delays and stress.
- **Understand and improve existing infrastructure** by analyzing historical traffic and weather data to support better road management strategies and smarter urban mobility solutions

Template:

TrafficTelligence: Advanced Traffic Volume Estimation with Machine learnning Learrning

1. CUSTOMER SEGMENTIS) Orgamizations racing problem related traffic volume estimation	**2.JOBS-TO-BE-DONE / PROBLEMS** 2 What challenge current traffic volum-estimation does it poss customstioers? *(e.g. manual traffic counts, lim*	**3. AVAILABLE SOLUTIONS** What solution(s) or aproachs ca used to caddress this problem e.g. manual traffic
4. CUSTOMER CONSTRAINTS CC Factors areventing customers from addressing the problem (e.g. manual data	**5. PROBLEM POOT CAUSE** RC Whats nokes the problem comples/or difficult to sorve 'vegertaol storrie *(e.g. huclcating traffic pottems*, diverce geographica areas	**6. BEHAVIOUR** What custome as doing o/ difficult to solve address this problem and gain *customer buyin* (e.g. analyzing sensors
7. TRIGGERS TR How does or circomstances, many that may trigger customers to seek a better traffic volume estimation? (e.g. new *regulatyly requirements/ increased costs associated with zongestio*	**8. YOUR SOLUTION** SL How does your macthine learning solution better address your current solution (e.g. *enhanzing troffic volumes hosed bistorical atid* and *other features, enabling real-time prodictions*	**9. CHANNELS & BEHAVIOUR** EM How do customers use TrafficTelligence is delivered to customers? (B. x*fere*
10. TRIGGERS EM How can customerrs use. Traffic Telligence a better address free in sporation? (e.g. free trials dondēronstrations		**10. OPT-IN** 1O How do customers use TrafficTelligence if or how converted into tree and paying customers? (Free trials and demonstrato-tions ealily

References:

1. https://www.ideahackers.network/problem-solution-fit-canvas/
2. https://medium.com/@epicantus/problem-solution-fit-canvas-aa3dd59cb4fe