**Ideation Phase**

**Define the Problem Statements**

|  |  |
| --- | --- |
| Date | 27 June 2025 |
| Team ID | LTVIP2025TMID59638 |
| Project Name | TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning |
| Maximum Marks | 2 Marks |

**Customer Problem Statement – TrafficTelligence:**

A blue and yellow sign with white text

AI-generated content may be incorrect.

**Who is the customer?**  
Urban commuters, traffic planners, city administrators, and logistics companies who face unpredictable traffic congestion, delays, and planning inefficiencies.

**What are they trying to do?**  
They are trying to plan their travel routes efficiently, reduce commuting time, improve delivery scheduling, and make better decisions using real-time traffic insights.

**What’s the barrier or frustration?**  
Current traffic estimation systems are either outdated, generic, or reactive rather than predictive. These users often encounter: - Unexpected traffic jams due to weather or peak hours

* Lack of reliable data to plan ahead
* Time lost in rerouting due to poor traffic forecasting
* Delayed deliveries and resource wastage due to inaccurate volume predictions

**Why is it important?**  
Because traffic congestion affects not just personal comfort, but productivity, operational costs, fuel consumption, and urban stress levels. Without a predictive and intelligent system, users continue to face daily inefficiencies and delays.

**What do they need?**  
They need an AI-powered tool that can forecast traffic volume accurately by taking into account weather, time of day, holidays, and historical patterns—presented in an easy-to-use web interface with real-time predictions.

A screen shot of a computer

AI-generated content may be incorrect.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Problem Statement (PS)** | **I am (Customer)** | **I’m trying to** | **But** | **Because** | **Which makes me feel** |
| PS-1 | An urban commuter who travels daily through city roads | Plan my commute in a faster, smarter way | Traffic predictions are unreliable or unavailable | Current systems don’t consider real-time weather or traffic flow data | Stressed, delayed, and constantly anxious |
| PS-2 | A city traffic planner responsible for reducing congestion | Use data to make informed infrastructure or traffic signal decisions | I lack real-time and accurate traffic volume forecasts | Manual tracking is inefficient and current tools don’t support intelligent insights | Overwhelmed, pressured, and unable to optimize city traffic flow |