Project Phases Template

Project Title:

Advanced Traffic Volume Estimation with Machine Learning

Team Name:

LTVIP2025TMID35510

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Brainstorming and Ideation:

1. Problem Statement:

Urban areas are facing increasing traffic congestion, resulting in longer commute times, higher fuel consumption, and increased environmental pollution. Traditional traffic monitoring systems are often costly, outdated, and lack real-time adaptability, making it difficult for city planners and traffic authorities to manage traffic efficiently.

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2. Proposed Solution:

TrafficTelligence uses machine learning algorithms to estimate traffic volume in real-time by analyzing data from various sources such as CCTV footage, GPS, and sensors and by given values. This system provides accurate, scalable, and adaptive traffic volume predictions, enabling smarter traffic management and planning.

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3. Target Users:

* City transportation departments
* Urban planners
* Traffic control and management agencies
* Smart city developers
* Commuters and navigation apps (indirectly)

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4. Expected Outcome:

An intelligent traffic estimation system that improves traffic flow efficiency, supports decision-making for infrastructure development, reduces congestion, and enhances commuter experience. It will also pave the way for smarter, data-driven urban mobility solutions.