

Project Name: Traffic Flow Optimization Module

Project Goal: Develop a software feature to optimize traffic flow at intersections using AI-based signal control.

Product Backlog:

User Story - As a traffic engineer, I want the system to analyse real-time traffic data to detect congestion.

Story Points: 5

User Story - As a city planner, I want the system to prioritize emergency vehicles for green signal to ensure rapid response times.

Story Points: 8

User Story - As a commuter, I want the system to adjust signal timings based on traffic volume to minimize delays.

Story Points: 13

User Story - As a pedestrian, I want the system to provide safe crossing times at intersections.

Story Points: 5

User Story - As a cyclist, I want the system to detect and accommodate bicycles at intersections.

Story Points: 8

User Story - As a city official, I want the system to generate reports on traffic patterns and signal performance.

Story Points - 5

Sprint Backlog (Sprint 1):

User Story - Implement real-time traffic data collection module.

Story Points - 3

User Story - Develop emergency vehicle detection and priority signal control.

Story Points -5

User Story - Integrate adaptive signal timing algorithm.

Story Points - 8

User Story - Implement pedestrian crossing signal logic.

Story Points - 3

Sprint Backlog (Sprint 2):

User Story - Enhance bicycle detection and signal control capabilities.

Story Points: 5

User Story - Develop reporting module for traffic analysis.

Story Points: 8

User Story - Conduct usability testing and gather feedback.

Story Points: 3

Project Risks:

1. Limited access to real-time traffic data APIs.
2. Technical challenges in implementing adaptive signal control algorithms.
3. Stakeholder resistance to changes in signal timings.