Public Transport Optimization

Phase 2: Innovation

What do we do?

- Solid IOT sensor system
- Platform (Mobile app) for real time transit information
- Integration of components using python
- Required/Efficient predictions using Artificial Intelligence and Machine Learning\

Objectives:

1. ***Real-Time Data Collection:***

    Steps taken:

    Install IoT sensors on public transportation vehicles to gather real-time information on:

    - Passenger counts
    - Locations of individual cars
    - Live location of public/government buses (Stops based)

2. ***Data Analysis and Prediction:***

    Steps taken:

    Create algorithms to:

    - Forecast arrival timing
    - Analyse service interruptions
    - Predict delay of vehicles
    - Predict the crowd strength

    Use machine learning techniques to:

    - Forecast arrival times
    - Find patterns for route optimisation

3. *Real-Time Information Dissemination:*

Steps taken:

Establish a user-friendly mobile app to offer:

- Real-time transit information
- Anticipated arrival times
- Route updates
- Capacity levels

4. *Efficiency Enhancement:*

Integration of all components using python to accomplish the above steps. We can improve efficiency through:

- Reducing wait times and congestion
- Optimising transit routes
- Making timetables based on data-driven insights

Block Diagram: