

Smart Bus Tracking System using Raspberry PI

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Abstract: *The Smart Bus Tracking System using Raspberry Pi is designed to provide real-time location tracking and monitoring of buses, enhancing the convenience and safety for passengers. The system uses a GPS module connected to a Raspberry Pi to continuously collect location data. This data is then transmitted via the internet to a cloud server, where it can be accessed through a web application or mobile app by passengers and administrators. The system enables passengers to view the live location of buses, estimated arrival times, and route details, minimizing waiting times and improving route management. Additionally, it supports features such as speed monitoring and alerts for delays or deviations. This project offers a cost-effective, scalable, and efficient solution for public transportation management using IoT and embedded technology*

Keywords: Smart Transportation, Bus Tracking, Raspberry Pi, GPS Module, Real-Time Tracking, IoT (Internet of Things), Cloud Server, Location Monitoring, Public Transport Management, Live Bus Location, Mobile Application, Embedded System, Route Optimization

