IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.67
Volume 5, Issue 7, March 2025

Smart Auto Toll System Using Node MCU and GPS

Aboli Vishal Jadhav[1], Shreya Ravindra Nalawade[2], Vaibhavi Ram Jadhav[3], Rutuja Rangrao Pawar[4], M. R. Singade[5]
Department of Electronics and Telecommunication[1-5]
JSPMs RSCOE Polytechnic, Tathawade, Pune, India

Abstract: *The rapid advancement of IoT technology has paved the way for smarter transportation systems. This paper presents an IoT-Based Smart Auto Toll System using Node MCU and GPS, aimed at reducing congestion and enhancing efficiency at toll plazas. The system utilizes GPS for vehicle location tracking and Node MCU for real-time data processing and communication. Upon approaching a toll booth, the system automatically detects the vehicle, verifies user credentials, and deducts the toll amount from a pre-registered account without requiring manual intervention. This reduces waiting time, minimizes human errors, and enhances security. The proposed system offers a cost-effective and scalable solution for modernizing toll collection infrastructure. Experimental results demonstrate its feasibility and effectiveness in real- world scenarios.*

Keywords: IoT, Smart Toll System, Node MCU, GPS, Automatic Toll Collection, RFID, Transportation

DOI: 10.48175/568