

# Advance Toll System with Automatic Vehicle Overweight Detection

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**Abstract:** This paper presents the development of an innovative "Advance Toll System with Automatic Vehicle Overweight Detection" using Internet of Things (IoT) technology. The project focuses on integrating IoT devices like the ESP32 microcontroller, load cells, RFID scanners, and servo motors to automate and enhance toll collection processes. Key features include automatic vehicle weight calculation using load cells, seamless vehicle identification with RFID scanners, and automated barrier operations using servo motors. Centralized control enables efficient management and monitoring of toll booths through a unified platform. Through this project, we aim to revolutionize traditional toll collection systems by offering a highly accurate, efficient, and centralized approach. The findings demonstrate the practicality of deploying advanced toll collection systems leveraging IoT technology, with potential benefits including reduced traffic congestion and improved user experience for toll operators and road users.

**Keywords:** Toll System, RFID based Toll Collection, Vehicle Theft Detection, Vehicle Weight Detection, Autonomous toll system

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