IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 2, December 2025
Impact Factor: 7.67

# A Smart Campus Resource Management System

**Dr. Parvati Kadli [1], Ms. Afreen S[2], Ms. J Zoya Meherin[3], Mehek Firdose[4]**
[1]Professor, CS&E Dept, Proudhadevaraya Institute of Technology, Hosapete
[2,3,4]Students, CS&E Dept, Proudhadevaraya Institute of Technology, Hosapete

**Abstract:** *This project presents a Smart Campus Resource Management System that integrates IoT, artificial intelligence, and QR-based automation to improve campus operations, security, and resource utilization. The system combines three core modules: face-recognition-based smart attendance, IoT-enabled water level monitoring and automatic pumping system with automated alerts, and a QR- based navigation system for visitors and students. A digital library interface is also implemented to provide structured access to academic resources.*

*Using ESP8266 NodeMCU, moisture sensors, Python-based facial recognition, and QR scanning technologies, the system continuously monitors campus activities and provides real-time updates. Water levels are tracked using moisture sensors, and alerts are generated when thresholds fall below predefined limits. The QR navigation module assists users in locating departments easily. By automating attendance, resource monitoring, and navigation, the system reduces manual work, improves accuracy, and enhances overall campus management efficiency. This integrated solution supports smart campus automation and enables scalable future expansion..*

**Keywords**: Smart Campus, IoT, Face Recognition, Water Monitoring and automatic pumping, QR Navigation, Automation, Digital Library



DOI: 10.48175/IJARSCT-30397