



SURAJ DEV KUMAR

Aspiring Embedded Systems Engineer

SRJ

PROFILE

"Passionate Embedded Systems and Cloud Technology Engineer with hands-on training from Cranes Varsity. Proficient in microcontroller programming (LPC1768), sensor interfacing, and real-time embedded applications. Skilled in Embedded C, Verilog HDL, IoT, UART/I2C/SPI protocols, PWM, timers, and debugging techniques. Experienced in automation, smart systems, and monitoring solutions. On the cloud side, experienced in building and deploying real-time dashboards, IoT-based systems, and applications using AWS, REST APIs, and GitHub. Seeking to apply my expertise in Embedded Systems, IoT, and Cloud Technology to develop innovative and reliable solutions that enhance performance and efficiency."

WORK EXPERIENCE/ CERTIFICATIONS

CERTIFICATIONS

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|---|----------------|
| GeeksforGeeks – C Programming, C++, Data Structures & Algorithms | 2025 – PRESENT |
| Skill Dzire – Internship in Embedded System, 1 month | 2024 – PRESENT |
| Workshop – Full Custom IC Design using Cadence EDA Tool | 2023 – PRESENT |
| Cranes Varsity [Bangalore] – Internship in Embedded System, 2 month | 2025 – PRESENT |
| Maven Silicon – VLSI SoC Design using Verilog HDL | 2023 – PRESENT |

WORK EXPERIENCE/ PROJECTS

Smart IoT-Based RFID Attendance System

2024 – PRESENT

- Developed using NodeMCU, RFID, and XAMPP for online tracking.
- Skills: Embedded C, MySQL, HTML, PHP

IoT-Baesd Wearable Safety Device for Alzheimer's Patients

2025-PRESENT

- ESP32 | GSM/GPS| IoT | Embedded System | Health Moneitoring
- Developed a smart wearable with real-time vitals monitoring(MAX30102, DHT22) and fall detection(MPU6050).
- Added automated GSM/GPS emergency alerts with live location for caregiver response.
- Implemented RTC-based reminders with distinct buzzer tones and OLED message for medicine and meals.
- Skills: ESP32,Embedded C/C++,IoT sensors,GSM/GPS,PCB Design,Real-Time System

Real-Time Data Logger using LPC1768 Microcontroller

2025 – PRESENT

- Implemented data acquisition and storage system with timestamp logging
- Skills: Embedded C, LPC1768, UART, RTC, ADC and LCD

Cloud-Based Intelligent Whether Dashboard with AI Assistant

2025-PRESENT

- Developed a real-time weather monitoring dashboard with auto-refresh, city search, and forecast visualization.
- Integrated OpenWeatherMap APIs for live weather, air quality, and 5-day forecasts.
- Built an AI-powered travel assistant to provide personalized insights and safety recommendations.
- Deployed globally using AWS Amplify/S3 and version-controlled with GitHub.
- Skills: React.js, Vite, REST API, JavaScript, AWS (Amplify/S3), OpenAI API

Smart IoT-Based Irrigation System

2025 – PRESENT

- Developed using NodeMCU, Sensor and Blynk console for online tracking.
- Skills: Embedded C, Blynk, token, PHP

Bluetooth Control Robot with Obstacle Detection

2025 – PRESENT

- Controlled via mobile app with integrated voice commands.
- Skills: Arduino, Ultrasonic Sensor, Bluetooth Module

Smart Wi-Fi Home Automation System

2023 – PRESENT

- Enabled remote control of home appliances via smartphone using Wi-Fi Connectivity.
- Skills: ESP8266, Arduino, Telegram App(Blynk App), IoT

Android Application: Smart File Viewer (App Under Development)

2025 – PRESENT

- Designed to organize and view various file formats efficiently on Android Devices.
- Skills: Java, XML, Android Studio, File Handling

CONTACT

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EDUCATION

- Centurion University of Technology and Management**
B.Tech – Electronics & Communication Engineering
2022 – 2026 || CGPA:8.65 / 10
- A.N.D College, Shahpur Patory**
Intermediate (MPC) // BSEB Board
2020 – 2022 || 73%
- St. Mary's Public School, Shahpur Patory**
Matriculation (Class X) // CBSE Board
2019 – 2020 || 77.2%

SKILLS

- Embedded C, C, C++, Verilog
- LPC1768, ARM7, Keil µVision, Proteus
- UART, I2C, SPI Protocols
- Timers, PWM, LCD, Keypad, Servo Motor, ADC, APP Development
- IR Sensor, Buzzer, Sensor Interfacing
- Real-Time Application Development
- Problem Solving & Debugging
- MATLAB Simulink

LANGUAGES

- English (Fluent)
- Hindi (Fluent)
- Maithili (Intermediate)