

Rahul Kumar

Roorkee, Uttarakhand, India

+91-7631428236 | rahulraj2392006@gmail.com

linkedin.com/in/rahul-kumar | github.com/Rahul-kumar2309

OBJECTIVE

Motivated and detail-oriented Electronics and Communication Engineering (ECE) student with a strong interest in Hardware-Software Integration and IoT Systems. Proficient in working with microcontrollers (ESP32, Arduino) and developing real-time monitoring dashboards. Seeking to leverage a recent internship offer from Pro Desk-IT and growing expertise in Embedded Systems and Cloud Computing to design impactful technological solutions.

TECHNICAL SKILLS

Hardware & Edge IoT: ESP32, NodeMCU, Embedded C++, Sensor Fusion (mmWave, HC-SR04, 5-Channel Flame Array, MAX30100/30102, MPU6050)

Web & Software Development: HTML, CSS, JavaScript, React.js, Python, Django, Tailwind CSS, WebSockets, Three.js (WebGL 3D Rendering)

Tools & Version Control: VS Code, Git & GitHub

PROJECTS

AUTONIX: Autonomous Disaster Rescue Rover | *Sensor Fusion, Django, WebSockets, Three.js*

- Engineered an autonomous rover utilizing low-frequency acoustic pressure waves (40–60 Hz) for non-destructive fire suppression.
- Designed a custom sensor fusion array integrating a 5-channel flame sensor for directional tracking and mmWave radar for life-sign detection.
- Developed a real-time, zero-latency Mission Control dashboard using Django Channels (WebSockets) and Three.js to render live 3D telemetry and spatial data.

Smart Agriculture System with Blynk Dashboard | *ESP32, C++, Blynk IoT*

- Designed an automated irrigation system using ESP32 and Soil Moisture sensors to monitor field conditions in real-time.
- Integrated hardware with the Blynk Mobile Dashboard to provide farmers with remote monitoring and automated pump control capabilities, improving water usage efficiency.

Unified Waste Management Hub (Green Track Dashboard) | *Hackathon Project, Web*

- Developed a centralized Real-Time Web Dashboard to synchronize data between Citizens, Moderators, and Volunteers.
- Designed a Multi-Role Interface (Admin, Moderator, Volunteer) featuring live analytics, waste hotspot tracking, and task verification systems.
- Implemented "Report Verification" and "Task Completion" workflows to streamline community waste management operations (as featured in project demos).

EXPERIENCE

Pro Desk-IT

Summer Intern (Incoming)

Remote / On-site

Upcoming

- Received an offer letter for a Summer Internship focused on IT operations and technical workflows.
- Preparing to apply technical problem-solving skills in a corporate environment.

EDUCATION

Roorkee Institute of Technology

B.Tech in Electronics and Communication Engineering (ECE)

Uttarakhand

2025 – 2029

Muneshwar Singh Muneshwari Samata College

12th (Senior Secondary)

Vaishali

2022 – 2024

Best Model Public School

10th (Secondary)

Vaishali

2022

ACHIEVEMENTS & EXTRACURRICULARS

National Finalist: Top 10 National Finalist — Quantum Hackathon (2026).

Cloud Certified: Earned 19 skill badges in Google Cloud Study Jams (2025-26 Cohort 2).

Hackathon Participant: Competed in HackSprint, focusing on rapid prototyping and collaborative problem-solving.