

Irfan Fathan M

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Profile Summary

I am an Electronics and Communication Engineering student with a solid foundation in circuit design, embedded systems, and IoT applications. I have proficiency in microcontrollers such as ESP32, Arduino, and PIC, along with experience in PCB design and hardware prototyping for robotics and automation. I am dedicated to creating innovative and reliable hardware solutions to advance technology.

Technical Skills

programming: C, C++, Python, Dart.

Embedded Tools: ESP-IDF, STM32CubeIDE, Arduino IDE, Keil, Proteus

Hardware: ESP32, Arduino UNO, STM32, 8051.

Software: Matlab, Proteus, Altium 365, Kicad

Education

Ernad Knowledge City Technical Campus, B.Tech in Electronics and communication

Sept 2022 – May 2026

- **Coursework:** Partial Differential Equation and Complex Analysis, Solid State Devices, Network Theory, Logic Circuit Design, Analog Circuits, Signals Systems, Analog to Digital Communication

Experience

Robotics And IoT Intern, Innoknowvex – Bangalore , IN

May 2025 – Aug 2025

- Designed and integrated embedded systems for robotics and IoT applications.
- Developed sensor-based automation systems using ESP32 and Arduino microcontrollers.
- Performed system troubleshooting, calibration, and optimization to ensure reliable field operation.
- Contributed to prototype PCB design, wiring, and hardware assembly.
- IoT platforms Blynk and ThingSpeak were used to implement real-time data monitoring.

Projects

AQUA Intel (Smart Water Quality Monitoring)

github.com/IrfanFathan/Aqua-Intel

- IoT-based project using ESP32, turbidity, pH, TDS sensors, and DS18B20 for temperature.
- Data sent to the Blynk IoT platform for real-time monitoring and alerts.
- Implemented safety analysis and water classification (safe, abnormal, dangerous).
- Tools used: Arduino IDE, ESP32, Blynk cloud.

Certifications / Achievements

- WorldSkills India – Mobile App Development (2024 State Level Finalist)
- Robotics Workshop – Certified by Eight Plane (2023)
- NASA Space Apps Challenge – Global Participant (2024)
- Robotics Workshop – Certified by Eight Plane (2023)

Extracurricular / Leadership

Team Member , Motridox – Manjeri , IN

Jan 2023 – Present

- Collaborated with a student-led robotics team to design and prototype projects in IoT, embedded systems, and automation.
- Participated in multiple hackathons, technical events, and workshops, gaining hands-on experience in sensors, microcontrollers, and real-time programming.
- Contributed to project documentation, presentations, and team coordination, improving communication and technical reporting skills.
- Explored topics in robotics, embedded C programming, and IoT platforms, applying knowledge to real-world problem solving.