

# FAZIL AHMED M

## Electronics and Instrumentation Engineer

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### About Me

Electronics and Instrumentation Engineering student with a strong foundation in core concepts and a broad understanding beyond the curriculum. Adept at integrating hardware and software solutions for efficient system performance. Passionate about technology, innovation, and problem-solving in diverse engineering fields. Quick learner with strong analytical and research abilities. Committed to continuous learning and adapting to emerging technologies. Seeking opportunities to apply technical expertise in a dynamic environment.

### Education

**Sri Sai Ram Engineering College, Chennai**

Tamil Nadu, India

B.E Electronics and Instrumentation Engineering, CGPA: 6.64/10

Oct. 2022 - May. 2026

### Experience

#### Summer Intern

Jan. 2025

Techpower solutions

On-site, Chennai

- Designed and implemented embedded systems using microcontrollers like ESP32, STM32, and Arduino.
- Developed firmware in C/C++ for real-time data acquisition and processing from various sensors.
- Integrated IoT communication protocols such as MQTT, HTTP, and WebSockets for cloud connectivity.
- Worked with peripherals like I2C, SPI, UART, and PWM to interface sensors and actuators.
- Debugged and optimized embedded software using tools like JTAG, logic analyzers, and serial debuggers.

### Projects

#### Underwater roV for headrace tunnels

2022 – Present

Surveillance and Maintenance

MATLAB, Keil µVision, Python

- Designed and developed an underwater ROV for headrace tunnel inspection and maintenance.
- Integrated cameras and sonar sensors for real-time surveillance and mapping.
- Implemented a remote control system with tethered communication for deep-water operation.
- Developed embedded firmware for motor control, depth sensing, and navigation in constrained environments.
- Conducted field testing to evaluate performance in varying water conditions and tunnel structures.

### Skills

**Programming Languages:** Familiar With (🐍 python, 🇨 C)

**Designing Skills:** 📄 HTML, 🎨 CSS

**Designing Tools:** 🌐 Wordpress, 🛒 Shopify, 🎨 Figma

**Languages:** Tamil, English, Hindi, Urdu

### Certifications

- NPTEL - Design Thinking, Python for Data Science, MEMS
- FIGMA BOOTCAMP organized by Revamp Academy
- IIT Bombay- C Programming Spoken tutorial