

Aman Shaikh

Embedded Systems Engineer

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Technical Skills

Programming Languages: C , Python

Communication Protocols: UART, SPI , I2C, Bit Banging

Software Architectures: Bare Metal, State Machines, Linux

Hardware: Atmega32, Raspberrypi

Tools: Git , Kicad , Linux, Logic Analyser

Work Experience

Ground Screw Company - *Embedded Systems Engineer*

2024 - PRESENT

- Developed **PCB design** which resulted in **hardware footprint reduction by 50%** and enabled on-site peripheral swapping.
- Enhanced the product by **testing and integrating new sensors via I2C and UART**.
- Implemented remote access capabilities to enable **on-site firmware updates** and **error resolution**.
- **Managing GitHub repositories**, overseeing pull request reviews and merging, to ensure smooth collaboration and version control
- Demonstrated strong soft skills by effectively guiding Product Operators on task execution and **providing remote troubleshooting support**.

Projects

[Hardware Abstraction Layer for Atmega32](#) - Atmega32, BareMetal Programming, Embedded C, Bit Banging, I2C, SPI, UART, Timers, ADC, GPIO, RTC, MakeFile, Shell Script

[ESP-01S based Compact Wifi controlled Switch Board for Automation](#) - Kicad, Footprint Design, ESP, Soldering, Component Selection

Research Publications

[Incorporating LoRa Based Wireless Sensor Network and Machine Learning Technologies to Improve Precision Agriculture](#) (01 / 02 / 2025)

[An Intelligent LoRa-Based Wireless Sensor Network Mesh Architecture to improve Precision Agriculture](#) (28 / 01 / 2024)

[Decision Tree-Based Electricity Optimization Using Intelligent Appliance Controller](#) (28 / 02 / 2024)

[An Enhanced Intelligent Algorithm on Fault Location System](#) (01 / 03 / 2023)