

Rishabh Sati

Location: Delhi, India

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EMBEDDED SYSTEM AND IOT ENTHUSIAST

I'm an inventive engineer eager to contribute as a full-time engineer at your company with a Master's in **VLSI Design and Systems**, solid analytical and problem-solving skills, and excellent fluency in the electronics and embedded domain.

EXPERIENCE

Embedded Developer

Marvinno Technologies India Pvt. Ltd.

Jan 2023

Delhi, India

- Experience with AVR and ARM processors, and participate in developing I2C, SPI, and UART peripherals.
- Designed and developed touch-based UI using LVGL on WT32-SC01 and WT32S3-21S rotary screens, creating graphical elements in Inkscape and implementing firmware using Arduino IDE and VS Code.
- Maintain and optimize firmware for various products, ensuring reliability and performance.
- Expertise in double layer PCB design, fabrication, and testing for home and industrial automation applications.
- Participate in designing scalable and maintainable software solutions.
- Identify and resolve issues to ensure smooth operation of delivered software.

Research Intern

Marvinno Technologies India Pvt. Ltd.

July 2022 – Dec 2022

Delhi, India

- Optimizing and testing home automation modules.
- PCB designing and fabrication.
- Microcontroller and sensor interfacing.

TECHNICAL SKILLS

Languages : C, Embedded C, Git, Dart, HTML

Communication protocols : UART, I2C, SPI

Cloud Platform : Sinric Pro, Blynk, Thinger.io

Dev Boards : STM32, ESP32, ESP8266, Arduino(UNO, NANO)

Dev Tools : Squareline Studio, STM32 Cube IDE, Arduino IDE, Autodesk EAGLE, Easy EDA, OrCAD PCB Designer

Instruments Used : Multimeter, Digital oscilloscope

PROJECTS

Smart devices for Building Energy Management using IoT.

- Designed double layer printed circuit board using **Autodesk Eagle**.
- Used **Sinric Pro** IoT cloud platform for wirelessly controlling and monitoring the status of the device.
- Used **ESP32** microcontroller for running the developed firmware.
- Performed **hand soldering, component assembly**, and Monitored and performed troubleshooting for all fabrication process issues.
- Performed **Testing** with different kind of low and high power **resistive** and **capacitive loads**.

TFT based touch screen control using LVGL for home automation.

- Designed UI elements on **Inkscape**.
- Created UI using LVGL for **WT32-SC01** LCD HMI Display and **WT32S3-21S** rotary screen.
- Designed firmware using **Arduino IDE** and **VS Code**.

Double layer PCB design using orCAD PCB Designer.

- Designed a simple schematic and custom schematic library from scratch.

- Created footprint for components like thru hole **led 3MM, smd resistor, 2.54 MM pitch Connector** etc.
- Performed **schematic verification** and **footprints linking**.
- Performed component **placement ,manual routing** and created **gerber file**.
- **Monitored** and performed **troubleshooting** for all fabrication process issues.
- Planned **cost reduction strategies** in coordination with PCB design staff.

EDUCATION

Graphic Era (Deemed to Be University)

Master of Technology - VLSI Design and Systems

OCT 2020 - JULY 2022

Dehradun, Uttarakhand

HEMVATI NANDAN BAHUGUNA GARHWAL UNIVERSITY (A Central University)

Bachelor of Technology - Electronics and Communication Engineering

AUG 2016 - SEP 2020

Srinagar Garhwal, Uttarakhand

St. Theresa's School

Intermediate

APR 2015 - MAY 2016

Srinagar Garhwal, Uttarakhand

CERTIFICATIONS

- Research & Development Intern, Marvinno Technologies India Pvt. Ltd.
- Mastering Microcontroller and Embedded Driver Development, Udemy
- Double Layer PCB Design, Pantech Solutions
- Embedded C Programming, Pantech Solutions