

# Vaishnav Sabari Girish

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*Electronics and Communication Engineering final year student with solid foundation in Embedded Systems, Linux, and programming. Experienced through projects and internships, with leadership as Vice-Treasurer of Evalanche Club.*

## Education

### Jain (Deemed-to-be) University

BACHELORS OF TECHNOLOGY IN ELECTRONICS AND COMMUNICATION ENGINEERING

India

2022 - 2026

- School of Engineering and Technology
- CGPA: 8.2

## Skills

- Programming Languages** C, C++, Python, Rust, Bash, Lua, MATLAB
- Embedded Systems** Arduino, ESP32, STM32, PlatformIO, ESP-IDF, Embedded Linux
- Tools and Software** KiCad, Proteus, LT Spice, Linux Distributions, OpenSCAD
- Soft Skills** Team Work, Leadership, Problem Solving, Analytical Thinking, Adaptability
- Languages** English, Japanese, Tamil, Kannada, Hindi

## Professional Experience

### Depixel Tech

EMBEDDED SYSTEMS DEVELOPMENT INTERN

Bengaluru, Karnataka

August 2025 - October 2025

- Developed embedded firmware using Zephyr RTOS and Nordic microcontrollers, integrating sensor interfaces and wireless communication (Bluetooth LE)
- Designed and optimized PCB layouts for wearable IoT devices, ensuring reliability and efficient signal flow
- Learned how to use the Nordic Development Kit for prototyping and debugging
- Implemented low-power strategies for extended product lifetime
- Integrated sensor data collection and wireless communication protocols (Bluetooth LE) for real-time health monitoring

### Apsis Solutions

EMBEDDED SYSTEMS INTERN

Bengaluru, Karnataka

January 2025 - March 2025

- Engineered embedded software solutions for microcontroller-based systems, collaborating with multidisciplinary teams to synchronize hardware and software functions.
- Developed real-time applications and control scripts in C, Python, and Bash.
- Designed and programmed ESP32 IoT devices for automation tasks.

### LiveOut Solutions

PROMPT DESIGNER INTERN

Bengaluru, Karnataka

June 2024 - July 2024

- Managed cross-functional project timelines and deliverables, reinforcing adaptability and teamwork for specification alignment and project collaboration
- Conceptualized and designed AI-powered prototypes
- Produced high-quality visual content for marketing campaigns and product presentations using advanced AI-powered design platforms including Leonardo and Ideogram.
- Developed professional product mockups and prototypes for client presentations and marketing materials to enhance visual communication using Mockey.
- Built and customized online stores using Zoho Commerce with integrated payment systems, inventory management, and user-friendly interfaces for small businesses.

### PANTECH Solutions

INTERN

Bengaluru, Karnataka

June 2022 - July 2022

- Programmed STM32 and ESP32 boards for IoT control applications
- Programmed various microcontroller platforms including Arduino and ARM-based systems for automation and control applications in industrial settings
- Practiced PCB layout and component placement
- Assisted in firmware testing to ensure seamless hardware-software integration, supporting product reliability and performance.

## Certificates

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- 2023 **C Programming for Embedded Applications**, Linkedin Learning
- 2023 **Microcontroller Embedded C Programming**, Udemy
- 2024 **Object Tracking and Motion Detection with Computer Vision**, MathWorks
- 2024 **Learning LabView**, Linkedin Learning
- 2024 **Digital Signal Processing 1: Basic Concepts and Algorithms**, EPFL
- 2024 **Digital Signal Processing 2: Filtering**, EPFL
- 2024 **VLSI SoC Design using Verilog HDL**, Maven Silicon
- 2025 **Problem Solving and Logical Reasoning**, Coursera

## Projects

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### ARDUINO INTERACTIVE CLI

- A tool designed to simplify the transition from Arduino IDE to Arduino CLI. Features a user-friendly Text User Interface (TUI) to support beginners.

### COMCHAN SERIAL MONITOR

- A blazingly fast and minimal Serial Monitor application written in Rust. Features include : Serial Monitor I/O, Serial Plotter, Writing Serial data into files

### REMOTE FIELD MONITORING SYSTEM

- A field monitoring system enabling farmers to remotely track field conditions. Data is stored in the cloud and visualized through graphs and pie charts, providing clear insights into field status.
- Uses the ESP-NOW Protocol to communicate between the fields and home.
- Data is stored in ThingSpeak by MathWorks

### WIRELESS WATER LEVEL MONITORING SYSTEM (COMMUNITY PROJECT)

- A water level monitor designed to enhance safety and ease during overhead water tank maintenance, with wireless data transmission to maintenance authorities.

### PORTABLE WATER PURITY TESTER (PATENTED)

- **Patent Application Number:** 202341087033 A
- A portable water purity tester designed for on-the-go water quality testing.

### SMART DOOR LOCK USING LI-FI

- A smart door lock utilizing Li-Fi technology for enhanced speed, security, and effectiveness, allowing doors to be unlocked using a phone's flashlight.

## Publications

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Vaishnav, S. G. (2023). Star Location Pointer using MATLAB. *Jnana Chilume*, 6th Annual Series of National Conferences.