

VIDHU SARWAL

☎ +91-98056 57041 ✉ vidhu.sarwal19@gmail.com [in linkedin](https://www.linkedin.com/in/vidhu-sarwal) github.com/VidhuSarwal

Education

Thapar Institute of Engineering and Technology

Bachelor of Engineering in Computer Science and Engineering, CGPA **8.8/10**

2023 – 2027

Patiala, Punjab, IN

The Gurukul

12th Grade, PCM - **91.5%**

2021-2022

Mohali, Punjab, IN

Manav Mangal Smart World

10th Grade, **90.6%**

2019-2020

Mohali, Punjab, IN

Experience

Sentinal Innovations Pvt. Ltd.

IoT & Electronics Engineer Intern

June 2024 – Present

Remote

- Implemented and configured IoT systems using ESP microcontrollers and MQTT protocols, ensuring seamless communication between devices and the cloud.
- Designed and tested circuits for IoT applications, creating detailed layouts and conducting thorough debugging to ensure robust performance.
- Managed procurement and coordinated with external contractors for PCB manufacturing, overseeing production timelines and quality control.

Projects

Caffeen IoT Home Board | C, ESP8266, JS, Dart

January 2024

- Based on ESP8266, This board is capable to drive 4 relays, take analog input from sensors. Can be used to control home appliances as well as control scheduled applications like watering plants. This also comes with an android app made in flutter. [link](#)

ERP System development for Indian Army | Django, Sqlite

June 2024 – Present

- Backend developer in a team of four, working in Django to build an ERP system for Patiala cantonment for streamlined manpower management and task distribution

Votemaxxing | Flask, JS, MongoDB

May 2024

- Developing a blockchain-based voting web application utilizing Flask for backend. Ensured secure, transparent, and tamper-proof elections, advancing democratic processes through decentralized technology. [link](#)

Technical Skills

Languages: Python, C/C++, HTML/CSS, JavaScript, BASH

IoT frameworks: Azure IoT, Cisco IoT Cloud, MQTT, HomeAssistant,

DevOps: Nginx, Apache, AWS, Both server and server-less setup

Technologies/Frameworks: Qt, Flask, Django, MongoDB, ARM Cortex M3/M4

Dev Tools like git, Vim, Bash, Linux.

Firmware Device Reverse Engineering, Vulnerability Assessment

Using interfaces like JTAG, SPI etc. For Debugging

Leadership / Extracurricular

Gold Medal, Cyber Olympiad

2019

State Level

Gold Medal, World Robotic Olympiad

2017

Regional Round

- Led a team of three individuals at WRO Regionals 2017, overseeing software development for our competitive robot.
- Directed software development efforts, ensuring optimal performance and functionality of the team's robot during the competition.
- Collaborated closely with teammates to strategies and execute software development plans, fostering effective teamwork and communication skills.