



AVIKALP FULEY

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EDUCATION

B.tech Electronics and Telecommunication | Y.C.C.E 2024 | GPA: 7.59

Maharashtra HSC | Hislop Jr. College 2020 | 73%

CBSE SSC | Bhavans B.P.V.M Ashti 2018 | 84%

Relevant Course Work

VLSI

DSD

ELECTRONICS DEVELOPMENT

PCIE SPECS

PROFILE SUMMARY

A self-motivated, out-of-the-box thinking, and results-oriented fresher in Electronics and Telecommunication Engineering, I am seeking opportunities in the fields of R&D, Semiconductors, Automation, IIoT, Battery technology, and related areas. I have special training, aptitude, and keen interest in these domains.

TECHNICAL SKILLS

Programming Languages: C/C++, Embedded C, Verilog HDL, Ladder logic, SQL, HTML, CSS

Softwares: Arduino IDE, Quartus, Eagle, EasyEDA, Matlab

Protocols: PCIe 3.0, RS485, USB 2.0, PLC, LoRa

Others: Powerpoint, Adobe Illustrator, Photoshop, Canva, Figma

EXPERIENCE

Intern Post Silicon Verification Engineer | Blueberry Semiconductors Nagpur June2024 – Present

- Basic understanding of ARM architecture, server boot flow, board bring-up, and testing parameters.

- Well aware of the server boot flow

- Well aware of the I/O interface

- Knowledge of PCIe architecture, including Physical, Data Link, and Transaction layers, as well as enumeration and LTSSM.

- Proficient in 2-4 layer PCB design, including component selection, custom footprint creation, and layout design.

Intern Embedded Systems and IOT | SenseLive Technology Nagpur Jan2024 – June2024

- Developing sensor integrated microcontroller devices with circuit board design and verification with programming the device according to industry requirements on softwares like Arduino IDE, easyeda, MQTT, SQL.

Vice president Designing Committee | YCCE, YASH techfest Mar2023

- Managed a team of juniors to collaboratively design posters flyers and many other tasks.

- Worked of regular feedbacks in form of meetings and finalized designs combining everyone's best ideas.

Freelance Working experience Mar2020-Jan2021

- Music album designer, Website ui/ux designing.

TRAININGS

Trainee | Blueberry Semiconductors, Nagpur July24

- Learning the complete PCIe flow, Link training, basics of any motherboard connections & 4 layer PCB testing.

- Introduction to various protocols like I2C, SPI, USB2.0, PCIe, etc

Trainee | Siemens, VNIT, Nagpur Jan2023

- Learning the operation and Programming of Siemens S7-1200 PLC & HMI.

- Introduction to the basics of IIoT, semiconductor and VLSI industry and projects.

- Project task to use PLC HMI device to program an industry mixer.

CERTIFICATES

Arduino Electronics circuit, PCB Design & IOT Programming | Udemy
Advanced CMOS VLSI Designing | EnTC Dept.
Advanced sensor networks and network security | EnTC Dept.
Industrial Automation with IIoT | Siemens VNIT
Boot camp on Python | IEEE
C Programming | Binary Brains

PROJECTS

Project1 - Automatic cleaner

- **ESP32 | Lidar | brushless dc motors** -Automatic mapping and vacuum cleaning
- Mapping using Lidar sensor
- Product-based project developed within a team of four.

Project2 - Propeller clock

- Designed and etched the circuit board, created a custom LED strip, and soldered & etched PCB of complex circuit in a group of three
- The LED strip on the rotating propeller displays a pendulum and digital clock
- The main components used were Arduino Nano and Hall sensor

Project3 - Patient counter for hospital

- Managed a group of 4 members for the mini project using IC 8051
- To count the number of visiting patients in a hospital
- Using sensors and IC we determined how many patient enters a hospital

Project4 – IIOT multi device controller

- **ESP32 | MAX3185** Controllers - Managed the complete development and testing of device from start to end, using esp32 max3185 controllers and rs485 data managers.

Project5 – PCIe enhancement & analysis as PSV intern

- Undertook comprehensive training on Post-Silicon Validation, focusing on PCIe protocols and related interfaces, and conducted analysis on memory components.
- Theoretically studied **debugging PCIe** interfaces using **R.Pi. Debugger**, oscilloscopes and logic analyzers.
- Project In progress with ARM-based development boards to test and validate **board bring-up** and **I/O configurations**.
- Explored error reporting mechanisms within the PCIe.

Project6 – USB Communication Debugging (Conceptual) using DSO

- Analyzed USB 2.0 data transfer scenarios to validate protocol functionality and ensure signal integrity.
- Monitored USB signal structures and packet formats using a Digital Storage Oscilloscope (DSO).
- Validated data transmission accuracy and identified signal anomalies.
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Project7 – PC Build Project

- Built a custom PC using MSI B460M PRO VDH WIFI and Intel Core i5 10400, gaining hands-on experience in component assembly, compatibility, BIOS settings, and hardware troubleshooting.

SOFT-SKILLS

- Team Management: Managed juniors for YASH techfest designs.
- Collaboration: Worked with team on design and technical projects.
- Communication: Held feedback meetings for design finalization.
- Leadership: Led as Vice President, Designing Committee.
- Project Management: Managed patient counter project team.
- Problem-Solving: Developed sensor-integrated devices at SenseLive.
- Creativity: Designed music albums, websites, and techfest materials.
- Adaptability: Gained diverse experience in embedded systems, IoT, design.
- Technical Writing: Documented projects and created instructional content.
- Attention to Detail: Focused on precision in PCB design and circuit etching.
- Time Management: Balanced internships, freelance work, and studies.

PERSONAL DETAILS

LANGUAGES

- English- Proficient
- Hindi- Fluent
- Marathi- Native

PERSONALITY

- Observant
- Out of box thinking
- Analytical
- Empathy

PARENTS OCCUPATION

- FATHER – Institution Business Manager, AstraZeneca
- MOTHER – PGT Biology, Bharti Krishna Vidya Vihar

GOVERNMENT ID'S

- Aadhar
- Car + Bike Liscence
- Indian citizen Pan Card
- Passport status – applied

HOBBIES

- Trekking
- Short Bike rides
- Flute
- Art & Designing
- Photography