SUKHDARSHAN VINAYAK Electronics Engineer

Email   GITHUB   LINKEDIN   Portfolio

Highly motivated Electronics Engineer with 2 years of experience in embedded systems design and development. Demonstrates proficiency in schematic and PCB layout, test firmware development, and project team management. Seeking admission to a Master's program in Electronics and Electrical Engineering to deepen expertise and contribute to advancements in the field.

WORK EXPERIENCE

Electronics Engineer at Alfa Intellitech   (May 2022 - Current)

FPS Connect
- ❖ Executed schematic capture, PCB design, test case generation, debugging, and test firmware development activities.
- ❖ Utilized SIM (Subscriber Identity Module) module, ESP32 microcontroller, serial-to-serial converter, and LDO (Low-Dropout) regulator to enhance power distribution efficiency.
- ❖ Utilized communication protocols such as AT commands, SPI (Serial Peripheral Interface), and UART (Universal Asynchronous Receiver-Transmitter) for data exchange.
- ❖ Held accountability for ensuring the quality and reliability of the product throughout its development lifecycle.

STAFFRON
- ❖ Executed schematic capture, PCB (Printed Circuit Board) design, test case, debugging, and test firmware development.
- ❖ Integrated a camera, RFID (Radio-Frequency Identification), and LCD (Liquid Crystal Display) controlled via ESP32-S3 microcontroller.
- ❖ Implemented an attendance management system utilizing face recognition and RFID authentication mechanisms.
- ❖ Communication protocols including I2C (Inter-Integrated Circuit), SPI (Serial Peripheral Interface), and UART (Universal Asynchronous Receiver-Transmitter) for data transmission.

BlackHawk
- ❖ Engineered for overseeing the operation of forklift machinery.
- ❖ Supervised a project team of six, with a primary focus on debugging hardware and firmware, as well as ensuring the overall quality of the product.
- ❖ Equipped with advanced components such as STM32, ESP32, and a 9-axis gyroscope.
- ❖ Conducted thorough business logic assessments through manual and unit testing methodologies.
- ❖ Employed communication protocols such as RS485, SPI, and UART for seamless data exchange.

Automatic Aquarium Care Taker
- ❖ Initiated as the inaugural project, with a team comprising two members.
- ❖ Took charge of the development phases for both the Prototype and Final version.
- ❖ Execution encompassed various tasks including schematic design, PCB layout, test case formulation, debugging procedures, and test firmware development.
- ❖ Acquired foundational knowledge in C and C++ programming languages for embedded systems.
- ❖ Employed the ESP32-S3 microcontroller featuring 8 outputs, including a motor controller, a temperature sensor, and a camera module.
- ❖ Implemented UART communication protocol for hardware debugging purposes and microcontroller programming.

Front End Developer Intern at Newton School   **(Aug 2021 - Feb 2022)**

Facebook Login Page Clone
- ❖ Acquired proficiency in HTML and CSS programming languages.
- ❖ Successfully replicated the Facebook login page layout using HTML and CSS.
- ❖ Deployed the cloned Facebook login page on a GIT server for public access.

Calculator
- ❖ Acquired fundamental knowledge of JavaScript programming language.
- ❖ Developed a web-based calculator application using JavaScript.
- ❖ Implemented basic mathematical operations including addition, subtraction, multiplication, and division.
- ❖ Implemented functionality to store calculation history for future reference.

Age Calculator
- ❖ Developed a web interface for an Age Calculator application.
- ❖ Implemented functionality to calculate the user's age based on inputted birthdate.
- ❖ Ensured accuracy and reliability of the age calculation algorithm.

Cyber Security Intern at Cyberops Infosec LLP   **(Jan 2021 - June 2021)**

Responsibilities:
- ❖ Performing cyber and technical threat analyses.
- ❖ Discovering vulnerabilities in information systems.
- ❖ Analyzing Security System Logs, Security Tools, and Data.
- ❖ Generate VAPT report.

Training

Seldom India Technologies:
- ❖ Completed industrial training of 35 days on PLC, SCADA, and ACD.
- ❖ Experience real-time monitoring in the industry using PLC and SCADA monitoring units.
- ❖ Learned the basics of PLC and SCADA and working principles.

Global Institute Of Technology:
- ❖ Completed industrial training of 15 days on Analysis Modeling, Simulation, and Image Processing.
- ❖ Organized by Global Institute Of Technology.
- ❖ Learned the basic use of MATLAB simulation and image processing.

Personal PROJECTS

iLED Chaser:
- ❖ Engineered an IOT LED controller system featuring motion sensors for automated control.
- ❖ Developed a MOSFET driver to control different LED Strips using Shift Registers.
- ❖ Deployed on the local server for accessibility and utilized UART for communication.

iWiFi Switch:
- ❖ Engineered an IoT ON/OFF switch system using an ESP32 microcontroller.
- ❖ Designed to efficiently handle high voltage input ranging from 220-240V AC..
- ❖ Deployed on the local server for accessibility and utilized UART for communication

Skills

- PCB Design
- Schematic Capture
- Layout Design
- Component Selection
- Gerber Generation
- SMT and Through hole Soldering
- Footprint Creation
- HTML & CSS

- Kicad
- Altium Designer
- Embedded Systems Design
- Problem-Solving Skills
- Autodesk Fusion360
- Technical Documentation
- Project Management
- GITHUB

INTERESTS

- Bike Riding
- Martial Arts

- Gaming
- Technology

EDUCATION

Global Institute Of Technology, Bachelors in Electronics & Communication Engineering 2017 – 2021 CGPA: 6.75	Prince Uch Madhyamik Vidyalaya, Sikar Class XII - PCM (CBSE) 2017 CGPA: 5.47	Blooming Dales International School, Sri Ganganagar Class X (CBSE) 2015 CGPA: 8.00	Skill India, Certified Yoga Trainer (BWS/Q2203) 2021 Percentage: 78%

Achievements

- 2 Gold Medals at the international level in Karate for India.
- Won Second prize in Intercollege Tech Fest.
- Participated in ROBOTICS workshop and made Line Follower car.
- Participated in the regional-level Quiz competition.
- Won 1st prize in the Kabaddi team game.
- Won 2nd prize in the 20KM Cycling Race.
- Volunteered in Pradhanmantri Swachhta Abhiyan and led a team of 4.
- Worked as Head of Discipline at college tech-fest.