AREAS OF INTEREST

Robotics and Embedded system

Digital Twin of equipment

SKILLS

Embedded Systems: Embedded C, IoT, RTOS**,** Hardware Design, PCB design, Microcontrollers, PLC

Programming: Python, Embedded C, MySQL, Micropython (Beginner)

Communication Protocols: SPI, I2C, UART, Wi-Fi, BLE, Zigbee

Mechanical: CAD design, Additive Manufacturing

OS: Windows, Linux, Raspbian

AWARDS AND RECOGNITION

Two-time Runner up in **Mechatronics** at **India Skills - National Level** organized by Ministry of Skill Development and Entrepreneurship.

Secured 1st position in State Level - India Skills 2024 and **3rd Position** in 2022 in **Mechatronics** trade organized by MP state skill Mission.

Winner in Short Film competition at SVVV in 2022 and 2021

Winner in Photography competition at annual tech-fest of SVVV in 2020

Silver Medalist in National Science Olympiad, 2014

Dikshant Agrawal

Embedded System Engineer - IITI DRISHTI CPS Foundation
+91 – 9752010926 | agrawaldikshant3001@gmail.com

PROFESSIONAL SUMMARY

Positive Embedded Software Engineer who believes in innovating to bring about changes in people's lives. Enjoys discussions and testing ideas with varied teams. Diversified experience in the development, testing, and deployment of consumer electronics and embedded systems. Skilled in embedded programming in C, RTOS concepts, and hardware/software integration.

PROFESSIONAL EXPERIENCE

IITI DRISHTI CPS Foundation (Technology Innovation Hub of IIT Indore) – Embedded System Engineer
January 2023 – Present, Indore, India

- Creating a digital twin of critical care equipment using Python and machine learning; Developed the Digital Health Kiosk for real time patient monitoring.
- Employed ESP32's dual-core functionality to integrate biomedical sensors on I2C bus using RTOS and IoT principles.
- Implemented face authentication using Python and Computer Vision.
- Built the server in Python (Flask) and MySQL Database to store data on health parameters obtained from sensors.

Scientech Technologies Pvt. Ltd. – R&D Engineer
September 2022 – January 2023, Indore, India

- Researched and developed educational training kits for Data Acquisition, Smart Energy Meter, IoT and Artificial Intelligence.
- Designed PCB for EV battery charging circuit.

EInfochips Pvt Ltd (An Arrow Company) - Hardware Design Engineer (Intern)
January 2022 – July 2022, Ahmedabad, India

- Designed and Developed Buck, Boost and Buck-Boost converter using Cadence OrCAD.
- Worked on Schematic design, PCB layout, functional specifications, Component Selection, Communication Protocols- I2C, SPI, UART.

STRENGTHS

Critical Thinking

Initiative-taking

Adaptability

Problem Solving

Active listening

Empathy and Helpfulness

ADDITIONAL ACTIVITIES

Volunteer for **NHRCCB** for social activities, awareness, and protection of Human Rights

Core member for Samadhan Society, researching to make rape-free India.

PERSONAL DETAILS

Languages: Proficient in Hindi and English

Address: M-57, Veena Nagar, Sukhliya, Indore, India - 452010

INTERNSHIP & TRAINING

Toyota Kirloskar Motors - Trainee
September 2021 - September 2021, Bangalore, India

- Worked on industrial automation, PLC Programming, and multi production system by FESTO.

Dantin Technologies Pvt Ltd - Electronic System Design Intern
March 2021 - July 2021, Bangalore, India

- Addressed design challenges, schematic design, PCB layout, component selection, sourcing, and Python scripting to automation.

PROJECTS

WATER VENDING MACHINE - NMPSM
August 2022 - December 2022

- Integrated sensors using I2C and UART with Espressif Board to measure various parameters of drinking water and connected to server using HTTP.
- Controlled water dispending using Hall Effect based Fluid Flow Sensor.
- Consumer product which is implemented in market.

SMART CARRYCOT
August 2021 - December 2021

- Used Espressif Controller to integrate various sensors including gyroscope, humidity, temperature, microphone & ultrasonic sensor.
- Developed a backend algorithm to analyze sensor data and determine the desired parameters of the cot's occupant, along with a live camera feed.
- *Research paper on "**Smart carrycot**" is published in "Innovative and sustainable developments in electrical and electronics engineering".*

EDUCATION

Shri Vaishnav Institute of Technology and Science, SVVV
June 2018 - June 2022, Indore, India
B.Tech. in Mechatronics Engineering – CGPA: **8.30**

St. Arnold's Higher Secondary School, CBSE
April 2017 - April 2018, Indore, India
Senior Secondary - Science (10+2)