

Devi Surya Teja Chilukuri

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Profile

Highly motivated Embedded and Microsystems Engineer with a strong foundation in embedded systems, hardware design, and software development. Seeking a challenging role to apply my technical expertise and contribute to innovative projects.

Experience

Master Thesis March 2024 – present

Dissecto GmbH, Regensburg DE

- Development of RP2040 microcontroller based JTAG and SWD debugger with OpenOCD compatibility
- Implementation of Automated security scan test using JTAG of developed debugger
- Integration of RP2040 debugging functionality into Dissecto's HYDRA probe for remote automated tests
- Currently in the process of adding compatibility for Automotive NXP microcontroller

Intern Pre-development March 2023 – Sept 2023

Vitesco Technologies AG, Regensburg, DE

- Development and Simulation of intelligent capacitive DC-DC based control topology using Simulink and LtSpice to reduce voltage drop ripple in automotive power supplies to less than 1 ms
- Scaling topology and hardware for development of prototype device
- Prototype design using KICAD for PCB and Cube IDE for STM32L053 to implement switching in topology
- Validation of prototype with transient load to measure and test the capacity of prototype

Trainee March 2018 – June 2018

Silicon Touch Technologies, Vijayawada, IN

- Learned and Participated in Arduino and STM32 microcontroller programming and various sensors
- Worked on the development of a voice-activated alarm system using Raspberry Pi
- Utilising API's and ESP dev board to send data to cloud from sensors

Education

Ostbayerische Technische Hochschule Regensburg Sept 2021 – present

M.Eng in Electrical and Microsystems Engineering

- **Coursework:** Multiprocessors and Multicore Embedded systems, Fiberoptics, Optoelectronics
- GPA: 2.3 (Transcript)

VR Siddhartha College of Engineering Aug 2016 – March 2020

B.Tech in Electrical and Electronics Engineering

- **Coursework:** Embedded Systems design with RTOS, DC-DC converters, Digital signal processing, Microcontrollers programming with C, Control systems
- GPA: 2.7 (Transcript)

Projects

Fiber Optic SFP to USB Adapter

github SFP-USB

- Design and development of USB to fiber adapters using SFP modules to enable high speed data transmission over fiber networks
- This project includes hardware design, PCB layout, signal integrity analysis and firmware development to achieve reliable and efficient data conversion.
- Tools Used: KICAD, Wireshark, Linux(Ubuntu), C

Low Cost Automated Energy billing with Variable traiff slab

github A.E.B

- Design and simulation of circuits for measuring voltage, current and power factor
- Hardware design of the final design with EAGLE and integration with IOT with ThingSpeak for data collection and tariff calculation
- Tools Used : Proteus, Arduino, EAGLE, C

Intelligent garden monitoring system

2018

- Development of Automated Irrigation and fertilization systems for the garden
- Integration of weather data via weather API to optimise plant growth
- Tools Used: STM32, Cube IDE, C ,Open Weather

Skillset

Languages: C, Python

Scripting: Bash, Yaml

Software: VS Code, Eclipse,Cube IDE, OpenOCD Git, KICAD, Scapy

Others: RTOS, Linux, Docker, Proxmox,

Languages

Beginner: German

Fluent: English