Sravan Senthilnathan

Vellore Institute of Technology, Chennai
+91 94457 24213 | sravan.2021@vitstudent.ac.in

Summary:

Sophomore at Vellore Institute of Technology, Chennai. Enthusiast in various fields of electronics and computer science, And currently interested in the realm of digital logic design and computational acceleration in data processing.

Experience in working with a variety of general micro controller/processor architectures and application devices.

Currently seeking an Internship with any company that provides opportunities to work with embedded electronics systems or digital system design.

Projects and Experiences:

- **Internships:**
  - Embedded Firmware development @ **Shibaura Machine, Chennai TN, India**
    - **(4 week period)**
    - Aided in the develop embedded firmware for the Injection molding display/controller.
    - Firmware handled communication between the embedded NXP 8M SoC of the HMI display and the system controller, was written in C and ran beside the linux host system on the application processor.
    - This project also went into production, and the software is part of a market ready product.

  - Tech Article writer @ **Meadowlakemarsh LLC, USA (offsite)**
    - **(4 month period)**
    - Wrote tech articles for their blog (https://meadowlarkmarsh.com/blog/).
    - Articles regarding software management, IT, etc.

- **Open source contributions:**

  community contributions in:

  - Khadas Forum: since Sept. 2019
    - Active member aiding in community support with Single board computers.
  - Pine64 Pinetime community: since May. 2020
    - Active member and fellow moderator of the community, Working on the pinetime, Designing and programming watch faces, Tinkering with the firmware etc.

- **Technical Proficiency:**
  - Programming Application software and embedded device firmware in C/C++.
  - Operating Linux and Windows platforms and system administration.
  - Design and Analysis of Printed Circuit Boards.
  - 3D modeling and CAD design in fusion360.

- **Projects:**
  - **Embedded display cluster panel** **May – 2021**
    - Server stat visualization panel showcasing embedded graphics design and computer networking software.
    - Submission to the Khadas Community Competition 2022, Won an Excellence award.
      https://github.com/ZephyrLabs/surveillant

  - **DIY IoT wearable** **May – 2022**
    - DIY wearable build with off the shelf components, Firmware written in C++
      https://github.com/ZephyrLabs/esp32watch

  - **Experiments with SIMD** **Dec - 2022**
    - A hands on experience with SIMD vector instructions on modern CPUs for computational acceleration in data processing.
      https://github.com/ZephyrLabs/simd-playground

  - **Custom design 8 Bit ALU/CPU in Verilog** **Feb - 2023**
    - Applied knowledge project aimed at designing a 8 bit CPU.
      https://github.com/ZephyrLabs/8bit_cpu

- **Embedded Safety wristband** **Mar – 2023**
  - Developed a Bluetooth enabled safety wristband to detect accidents and mishaps using various on board sensors, as part of a Hackathon for Health related technologies in University.

- **Verilog Implementation of a vector instruction module** **Jun – 2023**
  - Wrote an implementation of a SIMD arithmetic unit in verilog that supports standard arithmetic operations on INT8, 16, 32 and FP16, 32 datatypes across 128 bit wide registers.

Academia:

- **Under grad:**
  - **Course Undertaken:** B.Tech Electronics and Computers
  - **GPA:** 8.74

- **Grade 12:**
  - **Completed:** June 2021
  - **Institute:** SSM Memorial School, Chennai - 63
  - **Grade:** 91%

- **Grade 10:**
  - **Completed:** March 2019
  - **Institute:** SSM Memorial School, Chennai - 63
  - **Grade:** 90%

Languages:

- **English – Native speaker**
- **Tamil – Native speaker**
- **Hindi – Preliminary certification**
- **Spanish – A1.1 certification**

Profiles:

- **Linkedin: https://www.linkedin.com/in/sravan-senthilnathan-8a0381227/**
- **Github: https://github.com/ZephyrLabs**