

SRUSTI B A

☎ +91 9380197463 ✉ srustiba3@gmail.com 🔗 <https://www.linkedin.com/in/srusti-profile/>

EDUCATION

Adichunchanagiri Institute Of Technology(VTU)

2020– 2024

*BE-Electronics&Communication-**CGPA-8/10***

Chikkamagaluru,Karnataka

TECHNICALSKILLS

Programming Languages: C, Embedded C, Data structures, Python.

Tools: Ubuntu, STM32CubeIDE, KeilIDE, GCC, Visual Studio Code.

Communication Protocols: Serial-Communication protocols like UART, RS232, RS485, SPI, I2C.

Operating Systems Linux: manual booting, TFTP booting

Microcontrollers:STM32F407VGT6, NodeMCU(ESP8266).

Microprocessors: RaspberryPi3b+,MYC-LMX

RECENT WORK-EXPERIENCE

Loginware Softtec Private Limited🔗

june2024–Present

Embedded-Developer (1Year)

Bengaluru,India

- Experience in Embedded software Development.
- Complete understanding of Embedded software development with exposure to various 8/16/32/64micro-controllers and micro-processors.
- Wired communication protocols UART, SPI and I2C.
- Responsible for hardware interfacing of display with Micro-controllers and Micro-processors.
- Responsible for interfacing sensors with Microcontrollers and Microprocessor.
- Flexible to work on Linux environment.
- Knowledge on **ARM Cortex-M4architecture**.
- Experience in ST-LINK Debug.
- Knowledge on RTOS like RTX and Free-RTOS.

MOST RECENT PROJECTS

Project-1:DRIVER DEVELOPMENT

- **Microcontroller:**STM32F407VGT6.
- **Role:** Embedded Software Developer and Hardware Interfacing.
- **Tools:** Embedded C, STM32CubeIDE, Logical-analyzer.
- **Description :** Driver development for various peripherals as:
 - **UART Protocol :** Communication between Controller to terminal of the system and system to controller for character and string data communication, using both polling and interrupt Method.
 - **I2C Protocol :** This project is interfacing of ADXL345 sensor for the controller using I2Cprotocol.Then Read/Write operation is done as per the requirement. Using Both Interrupt and Polling Method.
 - **SPI Protocol :** Here the interfacing between controller and RFID, then Read and write the data for the tags. Using both Interrupt and Polling method.
- During this driver development, I also worked on various peripherals like ADC, PWM, etc.
- **Responsibilities :** Understand the STM32F407VGT6 data sheet, enable the required GPIO-pins and clock

configurations by using reference manual.

- Develop the code as per the requirements and maintain the coding standards.
- Resolving Integration problems and testing.

Project-2: EAGLE MINI IIOT GATEWAY

- **Microcontroller:** ESP32.
- **Tools :** Espressif IDF, WSL, Vim.
- **Description:** The EAGLE Mini IIOT Gateway is a compact device for industrial use, featuring Ethernet, Wi-Fi, and 4G connectivity. It collects data from machines, sensors, and devices, transmitting it to cloud platforms or on-premise servers for analysis. Supporting Firmware Over-the-Air (FOTA) updates, it ensures efficient device management. This gateway enhances operational efficiency, scalability, and seamless integration of IIOT technologies in manufacturing environments.
- **Responsibilities:** Real-Time Data Acquisition and Secure Transmission using Ethernet, ADC/DAC Interface with FreeRTOS.

Project-3: MANUFACTURING PLANT-MACHINE

- **Language:** C and Shell Scripting.
- **Tools:** Vim, Ctags, cscope, GCC, Make, GDB.
- **Description:** Developed a modular simulation system to optimize manufacturing operations using linked lists for efficient management of plant and machine details. Enabled real-time modeling of production cycles, performance tracking and total production calculations.
- **Responsibilities:** Designed and implemented a modular simulation system for managing plants and machines with real-time performance tracking using C programming and linked lists.

Project-4: MYC-LMX BOARD DEVELOPMENT

Processor: MYC-LMX8MM SoM (based on NXP i.MX8M Mini).

Tools: Yocto, V4L2, GStreamer, WSL, Vim.

Description: The MYC-LMX board runs a Yocto-based embedded Linux OS tailored for multimedia and industrial applications. It supports various I/O and multimedia features suitable for edge AI and vision systems. The board was configured for image capture and streaming using V4L2 APIs and is currently being integrated with real-time video streaming solutions for surveillance and monitoring use cases.

Responsibilities:

- Yocto image customization and board bring-up.
- Camera interface and video capture using V4L2.
- Developing and testing video streaming pipelines.
- Debugging multimedia drivers and performance tuning.

INTERESTS

- Solving algorithmic challenges using C.
- Working with Linux environments for development and debugging.