

RAJESH C

CONTACT

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- Saligrama, Udupi

SKILLS

- C, Python Programming
- STM32 Microcontroller
- Digital Electronics
- UART, SPI, I2C, CAN Protocols
- Board Bring-Up | Sensor Interfacing | Application Development
- FreeRTOS | Yocto Project | Schematic & Datasheet Analysis

EDUCATION

- B.E in Electronics and Communication**
Shri Madhwa Vadiraja Institute of Technology and Management, Udupi, Karnataka
2018-2022
- Pre-University Course**
Viveka Pre-University College, Udupi, Karnataka
2016-2018
- SSLC**
Viveka English Medium High School, Udupi, Karnataka
2013-2016

INTERESTS

- Dancing
- Photography
- Cartophile
- Music
- Astronomy

LANGUAGES

- Kannada
- English
- Hindi

PROFILE

Experienced in Embedded Software Development with expertise in microcontrollers, sensor interfacing, driver implementation, and application development. Proficient in C programming, board bring-up, and debugging with STM32 series and Yocto Project.

WORK EXPERIENCE

Embedded System Engineer

SBCS India Pvt. Ltd, Bangalore (Client: Phytex Embedded Pvt. Ltd, Bangalore)

2023-Till date

PROJECTS

1. IoT-Based Tilt Switch Sensor

This project interfaced the KY-017 Mercury Tilt Switch with an STM32F446RE microcontroller using the HAL library to track the sensor's status (tilted or not) via UART communication and send the data to the Rigtect cloud. The functionality was successfully tested, and the sensor status was monitored and debugged using breakpoints.

2. IoT-Based Temperature and Humidity Data Monitoring

The STM32F446RE microcontroller interfaced with AHT25 and WE10 sensors via I2C to monitor temperature and humidity, air quality transmitting updates to the cloud every 10 minutes using FreeRTOS. The implementation included successful functionality testing and real-time data conversion.

3. Object Detection Using YOLO Model

A PhyBOARD-Pollux-i.MX 8M Plus SBC interfaced with a Phycam-M camera through MIPI-CSI interfaces for real-time object detection using Python3 and shell scripting.

4. DWIN Display Integration

Configured a DWIN display to communicate with the PhyBOARD Pollux i.MX 8M Plus for data transmission. Responsibilities included board booting, display setup, and validating functionality.

5. CI/CD Automation Using Jenkins on Rugged Board

Developed and deployed applications on the Rugged Board A5D2X using a Jenkins-based CI/CD pipeline. Responsibilities included board booting, Jenkins setup, and automation of build and deployment processes.

6. Kernel Space Integration

Integrated the BMP390 temperature/pressure sensor and Neo-F10N-00B GPS module on an L&T custom board by adding driver patches and performing pin muxing. Achieved successful board bring-up and tested functionality.

CERTIFICATIONS

- ElectronicSensors andCircuit Design -Alison
- Programmingfor Everybody (Getting startedwith Python)- Coursera
- Introductioonto EmbeddedSystems -Alison
- Accomplished 3days' Entrepreneurshipawareness camporganised by Entrepreneurship Development Institute of India

CO-CURRICULAR & EXTRA-CURRICULAR ACTIVITIES

- Participated inIEEE Eu-Reka2020 anational leveldigital teaching competition for students organised by IEEE Pune section.
- Volunteered in“Vyakthitwa VikasanaShibira 2021”organised forprimary and high school students conducted by Department of ECE, SMVITM.
- Organisedvarious activitiesunder NSS
- Participatedin Intercollege technicaland cultural events.