

JAGAPRADEEP S

Embedded Software Engineer

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📍 Bangalore, India

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EXPERIENCE

Embedded Software Engineer
Avionics Department

Agnikul Cosmos Private Limited

📅 July 2022 - Aug 2024

📍 chennai

Linux Device Driver Trainee

Embisys Labs

📅 Sept 2024 - Till now

📍 Bangalore

SKILLS

- Skilled in application development in RTLinux using C
- Basic Ethernet networking skills and Linux skills, proficient in using TCP/IP and UDP for network applications.
- Experienced in developing applications on STM32, ESP32(Arduino platform), Beagle-Bone, MKV31F512D(NXP's MCU) and LS1028A(NXP's SoC).
- Well experienced in using embedded peripherals like SPI, UART, I2C, ADC, DMA, and Ethernet.
- Hands-on experience with Board Bringup, Porting, Character Driver, USB Driver, SPI Driver, I2c Driver, PCI Driver, and Network Driver.

PROJECTS

Project Title:Agnibaan SOrted

AgniKul Cosmos Private Limited

📅 July, 2022 - Aug,2024

📍 Chennai

- Made significant contributions to **India's first private, Active-controlled Launch Vehicle** Agnibaan SOrTeD which was launched successfully on May 31, 2024.
- Designed and Developed a timing server software for time synchronization between 4 computers which performs operations based on Countdown time (CDT) which is the basis for countdown operations and ALS(Automatic launch sequence) of any launch vehicle. Precision Time Protocol(PTP) is used to synchronize time across all the computers, in the mission network which runs the ALS software.
- Worked on onboard telemetry data planning which complies with IRIG 106 chapter 4 standard used by the Aerospace Industry. Tested telemetry stripping software to decode the onboard telemetry data for live data monitoring and logging. This software is currently being used to collect launch data from ISRO stations.
- Worked closely on UART low-level drivers in Linux and debugged a mission-critical fault through extensive planning, testing, and data analysis.
- Worked on Hardware Package testing for qualifying the packages for the flight, by doing functionality tests for UART, SPI, and Ethernet.

IDE

STM32CubeIDE

STM32CubeMX

Keil

VS Code

Proteus

Arduino IDE

MCU Expresso

HARDWARE

STM32F,L series boards

bluepill

R-pi

NXP LS series

Teensy 4.1

Arduino

BeagleBone

EDUCATION

B.E in Electrical & Electronics Engineering

Sethu institute of Technology, Kariapatti

📅 2016 - 2020

GPA: 7.42/10

Higher secondary

P.K.N Boys Higher Secondary School, TN-state board

📅 2016

percentage: 61

Secondary Education(X)

Linga Matriculation School, TN-State board

📅 2014

percentage: 93

COURSES DONE

Advanced Embedded Systems

Vector India Pvt Ltd Chennai

📅 (Dec, 2021 - Jun,2022)

Linux Device Driver

Embisys Labs

📅 (Sep, 2024 - Till Now)

- Developed an application to calculate the main to redundant switching speed of a manageable switch (with real-time plotting in Python) and determined the time criticality of the network.
- Hands-on experience in **DO-178C** software development lifecycle, including **planning, development, verification, and validation** phases.
- Verified compliance with **software coding standards** using tools with **LDRA** and conducted manual code reviews for safety-critical applications.
- Qualified the software through the guidance of notable ISRO scientists who are experts in software development, verification, and validation of the software used in ISRO's launch vehicles.