

Rajesh Kumbhakar

Student

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I aspire to be a embedded firmware developer mainly around Embedded Linux/Linux Kernel, it has been my goal for quite sometime and I have been working my way towards my goal. I have a passion towards Embedded Linux, Device Drivers, RTOS and Firmware. Belief in self-learning & team work. Recognized consistently for quick adoption and innovative solution to challenging problems in real world applications.



Skills

Embedded Systems

Linux

RTOS

FreeRTOS

Yocto

Linux Device Drivers

GIT

C

STM32

ESP-IDF

DVP/SCCB

Open Source Project Development and Maintenance

Linux Kernel

USB

Data structures & Algorithms

Gerrit

Technical Analysis

Multitasking abilities

Flexible & Adaptable

Debugging proficiency

Hardware evaluation

User interface understanding

Customer proposals



Work History

Sep 2020 - Firmware Engineer

Current Episodic Labs Pvt. Ltd, Ahmedabad, Gujarat

- Consumer Electronics.
- Work-from-home.
- Worked on Camera-based applications based on FreeRTOS in ARM and ESP32 MCUs and technologies including DCMI, SCCB, DVP, etc.
- Responsible to identify potential requirements & supported technologies for the product.
- Responsible for Cost, Power & Memory analysis of the system.
- Responsible for Embedded System & Firmware design, development and



Projects

- BEMRR (01/2021 - Present): A smart video analysis device, for sports.
- Smart IoT Camera Node (09/2020 - Present): A smart camera system which can keep track of a user and it's activities.
- WearIn - Wearables for India (08/2020 - Present): Working on an on-going project for made-in-India Wearables, based on RISC-V based SHAKTI and VEGA processors.
- Minimal STM32F446RETx MCU HAL & Driver Libraries(05/2020 - Present): HAL & Driver Package form scratch for STM32F446RETx Microcontroller. Drivers for: GPIO, I2C, SPI, UART, RCC etc.
- SD1306 OLED Display Driver (11/2020 - Present): Complete HAL & Driver for SD1306 Display Controller with some helper Libraries.
- E-Health Monitoring System (11/2019 - Present): A low-cost IoT based Health monitoring system aimed to reduce the gaps and increase the medical facilities anytime anywhere. Semifinalist of the ongoing Indian Innovation Challenge and Design Competition 2019 by DST & Texas Instruments.



Education

May 2015 - Intermediate: Science

Apr 2017 *St. Xavier's Inter College - Chaibasa, Jharkhand, India*

- Elected Class Leader 2 times in a row.
- Elected Member & Advisor of the Students Council.
- Quarter Finalist All India IT Talent Search 2017 (District level champion).
- Coursework in Mathematics, Physics, Chemistry, Computer Science, English.

May 2018 - B.Tech: Electronics And Telecommunications

Current *KIIT Deemed To Be University - Bhubaneswar, Odisha, India*

- Coursework including C Programming, Microcontrollers & Microprocessors, Operating Systems, IoT.
- Member of Design & Thinking Lab.
- Co-Founder of KIIT Free & Open Source Software/Open Source Hardware Community.



Affiliations

- Member of Design & Thinking lab, working in Embedded Systems domain.
- Verified Member, RISC-V International Association



Languages

English

Hindi

Bengoli



Certifications

Feb 2021 LFD103: A Beginner's Guide to Linux Kernel Development



Interests

Embedded Systems

Embedded Linux

Linux Kernel

Linux Device Drivers

RISC-V

Open Source