# Mayur Vithal Dongre

Embedded Linux Developer
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## EDUCATION

**Indian Institute of Information Technology, Nagpur** *2019 - 2023*
B.Tech in Electronics and Communication; CGPA: (8/10)

**Anglo Urdu High School and Junior College,Pune** *2017-2019*
Senior Secondary (MSBSHSE); (75.6%)

**S.B.O.A Public School** *2016-2017*
Secondary (SSC); (94.8%)

## WORK EXPERIENCE

**Bitmapper Integration Technologies : Embedded Design Engineer** *1.5 Years (2023)*

- Built and customized Linux OS for iMX8M Hardware using Yocto Project .
- Interfaced iMX662 , iMX334 , iMX219 , ov5640 , AR0231 , AR0521 , AR0821 Camera Sensors.
- Handling ISP using V4L2 Framework , Communication Protocols (I2C,SPI) , Gstreamer , ALSA , Camera Driver Code Development , Interfacing various sensors.
- Projects Done: Rugged Camera , Body Camera , Helmet Camera

## TECHNICAL SKILLS

- **Programming Languages :** C , Python , Socket Programming.
- **Multimedia Frameworks :** Gstreamer , V4L2 , FFmpeg , ALSA.
- **Build Systems :** Yocto Project , Petalinux.
- **Hardwares Worked on :** iMX8M , iMX8Q , iMX8MP , Raspberry Pi 3B+, .
- **Protocols :** I2C , SPI , UART , UDP , RTSP , TCP.
- **Other :** DSA , Multi Threading , Cross Compilation , Shell Scripting , Device Tree , GIT.

## PROJECTS

**Rugged Camera:**

- Writing Device Driver for iMX662.
- Customizing and managing Linux based OS for iMX8, iMX8M Hardware using Yocto Project.
- Streaming the camera using a customized Gstreamer Pipeline over a Local Network using UDP Protocol.
- Interfacing a Low Light Sensor iMX662 with iMX8M Board.

- Rugged Camera is used in Gaganyaaan which will be launched by 2024 end.

**Skills: Yocto Project, Gstreamer, V4L2 Plugins, C Programming, Networking.**

**Body Camera:**

- Interfacing an AR0521 Camera Sensor.
- ST7701S Controller Display.
- Fuel Gauge, Audio Codec , GPS , Buttons
- Utilized ISP features in sensor manually by modifying driver code using V4L2 Framework.

**Skills: ALSA Framework, Multi-Threading, V4L2 Framework, SD8987 Wifi Module, C Programming.**

**Helmet Camera:**

- Interfacing an AR0821 Camera Sensor
- SD8987 Wifi/BT Module, GPS, Fuel Gauge, Audio Codec, RTC Module with IMX8M Hardware.
- Streaming using Hotspot of Camera over rtsp and udp protocols.
- Recording and taking snaps on button controlled by GPIO's.

**Skills: ALSA Framework, Multi-Threading, C Programming.**

- **Real-Time Location System using RFID Sensor:**
- Interfacing an RFID Receiver with Raspberry Pi
- Collecting the data from receivers through Wifi and showing them on the local server.

**Skills: Python, Raspberry Pi.**

## RELEVANT INTERESTS

Microprocessors , Embedded Systems, Camera Sensors, Multimedia Frameworks .

## ACHIEVEMENTS

GATE 2022 Qualified

NTSE Qualified

Winner in Cloud based Analog IC Design Hackathon conducted by IIT Hyderabad and VSD.

Winner in Mixed Signal Circuit Design and Simulation Marathon and won Prize Money of Rs 10,000 conducted by FOSSEE, IIT Bombay, along with VLSI System Design Corp. Pvt. Ltd and Redwood EDA

## LINKS

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