

Puranjay Mohan .

Embedded systems developer with hands-on experience in the design and development of microcontroller and embedded Linux based projects. Merging embedded systems and deep learning to build intelligent edge devices.

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EDUCATION

Bachelor of Technology in ECE

SRM Institute of Science and Technology [🔗](#)

07/2018 - Present

9.8 CGPA (Till Second Year)

WORK EXPERIENCE

Google Summer of Code 2021 Developer

The Linux Foundation

05/2021 - Present

<https://summerofcode.withgoogle.com/projects/#5247750473515008>

Achievements/Tasks

- Working on a device driver for Analog Devices' ADXL355 Accelerometer using Linux Kernel's IIO Subsystem.

Linux Kernel Mentorship Program Mentee

The Linux Foundation

06/2020 - Present

<https://people.communitybridge.org/project/5cdea024-4cc8-4e48-bc61-3660b5f06978>

Achievements/Tasks

- Worked on adding the support of **Latency Tolerance Reporting** to **Linux Kernel's PCI** Subsystem.
- Developed the algorithm to calculate and program the **LTR** values to the **PCIe** Extended Capability Structure.

Embedded Design Intern

Electrowaves Electronics Pvt Ltd

12/2019 - Present

Panchkula

<https://electrowaveselectronics.com/>

Achievements/Tasks

- Developed a Human Machine Interface for an EV Car Charger based on the **STM32MP1** processor.
- Developed a custom **Embedded Linux** distribution for the **STM32MP1** processor using the **Yocto Project**.

Contact: Sahil Garg - sahilgarg@electrowaveselectronics.com

AI Intern

Fitnano Technologies Pvt Ltd [🔗](#)

03/2019 - 04/2019

Greater Noida, India

Fitnano is a startup incubated by ST Microelectronics startup labs, working on Internet of Things and safety wearables.

Achievements/Tasks

- Built a **Face recognition System** based using **Dlib** and deployed it on **AWS lambda**.
- Programmed and debugged Embedded hardware and software based on **STM32** microcontrollers.
- Troubleshooted and solved issues related to **Amazon AWS**

Contact: Tarun Shekhar - tarun@fitnano.com

SKILLS

FreeRTOS

ARM Microcontrollers

Linux Kernel Development

Embedded Linux

Tensorflow

Numpy

Python

Matplotlib

Matlab and Simulink

Machine Learning and Deep Learning

Amazon AWS

PUBLICATIONS AND PERSONAL PROJECTS

A Tiny CNN Architecture for Medical Face Mask Detection for Resource-Constrained Endpoints

- <https://arxiv.org/abs/2011.14858>

- **Research** paper under review at ICEEE 2021 (Springer LNEE)

- Deployed a novel **CNN** architecture on **ARM Cortex-M7** using **Tensorflow Lite-Micro**

AVRLIB - Open source API library for AVR Microcontrollers

- **Embedded C** API for interfacing peripherals like **UART, I2C, SPI, LCD**, etc. with **AVR** microcontrollers.

- <https://github.com/puranjaymohan/AVRLIB>

MyUno - An AVR Microcontroller Dev Board

- Designed a development board for **AVR Atmega 328P**.

- Used **Altium Designer** for designing schematic and pcb.

- <https://github.com/puranjaymohan/MyUno>

Implemented AI algorithms like SVM and DNNs from scratch

- Used **Numpy** in python to perform the mathematical computations required to implement **AI** algorithms which include **NNs, SVM, Linear regression**, etc.

- https://github.com/puranjaymohan/machine_learning

OPEN SOURCE CONTRIBUTIONS

Linux Kernel

I have contributed more than 35 patches to the kernel mostly related to the **PCI** Subsystem. I maintain the **IIO Driver** for the **TMP117** temperature sensor.

<https://git.kernel.org/pub/scm/linux/kernel/git/next/linux-next.git/log/?qt=author&q=puranjay+mohan>

Embox

Ported the Embox RTOS to ST's Nucleo-l476rg.

<https://github.com/embox/embox/pulls?q=is%3Apr+is%3Aclosed+author%3Apuranjaymohan>

Zephyr

Added support for **TMP117** Sensor in the Zephyr project.

<https://github.com/zephyrproject-rtos/zephyr/pull/30704>