Puranjay Mohan .

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EDUCATION

Bachelor of Technology in ECE
SRM Institute of Science and Technology

07/2018 - Present *9.8 CGPA (Till third Year)*

WORK EXPERIENCE

Google Summer of Code 2021 Developer
The Linux Foundation

05/2021 - Present

https://github.com/puranjaymohan/GSoC-2021-DOC

Achievements/Tasks

- Developed a **device driver** for Analog Devices' ADXL355 Accelerometer using **Linux Kernel**'s **IIO** Subsystem.
- **Enabled** userspace applications to easily utilize the accelerometer without knowing it's working.

Linux Kernel Mentorship Program Mentee
The Linux Foundation

06/2020 - Present

https://mentorship.lfx.linuxfoundation.org/project/5cdea024-4cc8-4e48-bc61-3660b5f06978

Achievements/Tasks

- Worked on adding the support of **Latency Tolerance Reporting** to **Linux Kernel's PCI** Subsystem.
- Decreased the **power consumption** of PCI devices significantly.

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. **Increased** response time of the old HMI by **90%**.
- 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**. It was **deployed** in 3 schools. It was used for the automatic attendance of teachers.

Contact: Tarun Shekhar - tarun@fitnano.com

SKILLS

C Programming | Assembly (x86, ARM) | ARM Microcontrollers | Linux Kernel Development | Embedded Linux (Yocto) | Tensorflow-lite | Numpy | Python | Matplotlib | Matlab and Simulink | Machine Learning and Deep Learning | Amazon AWS

PERSONAL PROJECTS AND PUBLICATIONS

WeeOs - A tiny Real Time Operating System

- https://github.com/puranjaymohan/wee-os
- A small RTOS build from scratch for ARM Cortex-M3/4 devices.
- Supports two scheduling algorithms and four hardware devices.
- Achieves smaller memory footprint than mainstream RTOSs.

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

- https://arxiv.org/abs/2011.14858
- **Research** paper published at ICEEE 2021 (Springer LNEE)
- Deployed a novel **CNN** architecture on **ARM Cortex-M7** using **Tensorflow Lite-Micro** achieving **99.81%** accuracy.

AVRLIB - Open source API library for AVR Microcontrollers

- https://github.com/puranjaymohan/AVRLIB
- **Embedded C** API for interfacing peripherals like **UART** , **I2C** , **SPI** , LCD, etc. with **AVR** microcontrollers.
- Makes it super easy to develop AVR-based solutions without worrying about low-level coding.

MyUno - An AVR Microcontroller Dev Board

- https://github.com/puranjaymohan/MyUno
- Designed a development board for **AVR Atmega 328P.**
- Used **Altium Designer** for designing schematic and pcb.
- Made the Arduino UNO circuit more **robust** by adding protection features.

OPEN SOURCE CONTRIBUTIONS

Linux Kernel

Contributed more than 40 patches to the kernel. I maintain two IIO Drivers, for TMP117 and ADXl355 Sensors.
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