# Puranjay Mohan .

Syndicate Board Member at Next Tech Lab

Electronics and Embedded systems developer with hands-on experience in the design and development of microcontroller and embedded Linux based projects.


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## EDUCATION

**Bachelor of Technology in ECE**

SRM Institute of Science and Technology

*07/2018 – Present* *9.8 CGPA(First Year)*

## WORK EXPERIENCE

**Embedded Design Intern**

Electrowaves Electronics Pvt Ltd

*12/2019 – Present* *Panchkula*

*Electrowaves Electronics P. Ltd is the manufacturer of stand-alone UPS systems, Domestic Inverters, power converters, Electrical Panels, Fans and LEDs*

*Achievements/Tasks*

- Developed a Human Machine Interface for an EV Car Charger based on the STM32MP1 asymmetric multi core processor.
- Developed a custom Embedded Linux distribution for the STM32MP1 processor using the Yocto Project.
- Developed an HMI application for the Linux based on the PyQt5 framework for python.
- Interfaced the HMI to a 7 inch touchscreen and other peripherals through protocols like I2C and UART.
- Interfaced the HMI to a central server using REST APIs through the python's Requests library.

*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 API using AWS lambda and Dlib
- Programmed and debugged Embedded hardware and software based on STM32 microcontrollers.
- Tested and debugged BLE beacons and related hardware like spbtle-rf (ST Microelectronics)
- Troubleshooted and solved issued related to Amazon AWS

*Contact: Tarun Shekhar – tarun@fitnano.com*

## ORGANIZATIONS

Next Tech Lab (07/2018 – Present)

*Leading the Tesla Lab, which works on projects related to Embedded systems, electronics, and AI on the edge.*

Beeclust Multi Robot Systems Lab (06/2018 – 08/2018)

*Worked on surface mount device soldering and circuit designing.*

Atal Tinkering Lab Chandigarh (01/2017 – 03/2018)

*Worked as an Embedded Systems developer, worked on projects and conducted workshops and talks on various topics.*

Linux Foundation

*Contributing to Linux kernel as an opensource enthusiast and a hobbyist. 31 of my patches including checkpatch and others have been accepted till now.*

## SKILLS

STM32 | STM32MP1 | Yocto | Linux | ESP | BLE | Embedded Linux | IAR Workbench | STM32 CubeMX | Python | Autodesk Fusion 360 | Autodesk Eagle | AI / Machine Learning | Computer Vision | C Programming | Bootstrap 4 | php | Amazon AWS | API Development | Linux Shell | PyQt5 | Kernel Development

## PERSONAL PROJECTS

AVRLIB - Open source API library for AVR Microcontrollers

- Embedded C api for interfacing peripherals like UART, LCD, etc. with AVR microcontollers.
- https://github.com/puranjaymohan/AVRLIB

Implemented AI algorithms like SVM and NNs 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

Project Man - A Todo/project progress checklist web App

- Built a CRUD web app using python and Flask framework for organising and keeping track of my ongoing projects.
- https://github.com/puranjaymohan/ProjectMan

MVCGO - A bare-bones MVC framework built from scratch in php

- A basic MVC framework built from scratch to understand the concepts of Model View Controllers in php.
- https://github.com/puranjaymohan/mvcgo

Deep learning in C++ using Tiny-Dnn

- Tiny-DNN is a header only framework for DL application built in C++

Library Management system

- A basic CRUD application built in php for the sake of learning the language, in my class 11
- https://github.com/puranjaymohan/library

Microcontroller based automatic Lighting System

- As a part of Indian science congress, I designed a sensor based automatic lighting system for the cycle tracks of Chandigarh city.
- Used Arduino and proximity sensors

A Beginner's Guide to Surviving in the Linux Shell

- My article about the Linux shell, published in the free code camp publication on medium.
- https://www.freecodecamp.org/news/a-beginners-guide-to-surviving-in-the-linux-shell-cda0f5a0698c/