Fahad Mirza

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Github   : github.com/mirzafahad

Summary:

An Embedded Engineer with expertise in rapid hardware prototyping, firmware development, and testing.

Skills:

Languages	**:** C, Python; Familiar with: C++, MATLAB, Assembly, LabVIEW;
Electronics	**:** SMD Soldering, Bus Analyzer, Oscilloscope, Debugger, Spectrum Analyzer;
PCB	**:** Eagle, Proteus;
Protocols	**:** I2C, SPI, UART, RS485, DMX512, RS232, ModBus;
IoT	**:** LoRaWAN, Bluetooth 5; Familiar with: RFID, ZigBee, MQTT, AWS;
Concepts	**:** Unit Test, TDD, Version Control, SQLite, JSON, XML, Google style guide, Static code analysis.

Professional Affiliation:

Embedded System Engineer | *7-Eleven Cashierless* 📍Irving, Texas 📅04/2019 – Present

- Solving embedded challenges to reimagine convenience stores.

Firmware Engineer | *Haxiot Inc.* 📍Plano, Texas 📅03/2017 – 03/2019

- Led the firmware development of LoRaWAN software stacks for a modem and for an IoT end-device. Designed two LoRaWAN developer kits and developed both C and Python API for those.
- Developed Windows application using PyQt for our manufacturer that flashes, test and scan QRs of 16 LoRaWAN modems simultaneously during production.

Embedded System Engineer | *Next Gen Systems* 📍Arlington, Texas 📅06/2014 – 07/2016

- Collaborated with three multidisciplinary teams to solve challenges in sensor integration for robots, from designing hardware, developing their associated firmware to interface them with Robot Operating System.
- Developed software to automate MEMS sensor fabrication process and sensor characterization testbed that reduced the production time by 90% and halved the wastage.

Technical Lead (*TechshopBD*) | *Pi Labs Bangladesh Ltd.* 📍Dhaka, Bangladesh 📅04/2012 – 07/2013

- Tripled the product sale within 6 months with the help of a dedicated team and by emphasizing on local quality production and customer relation.
- Designed development kits, wrote tutorials, provided technical support and handled customers first-hand.

Embedded Firmware Engineer | *Pi Labs Bangladesh Ltd.* 📍Dhaka, Bangladesh 📅08/2010 – 03/2012

- Designed the initial iteration of our Vehicle Tracking System hardware and developed the device driver for the onboard components.
- Led a quality control team of three. Debugged and tested numerous hardware of 9 different products.

Academic Projects:

Remote Sensor Monitoring – build a low-cost IoT system that remotely monitored sensors (temperature, humidity, force), using Wi-Fi SoC that supports full stack TCP/IP and Microsoft Azure IoT service.

Academic Credentials:

M.Sc. in Electrical Engineering, The University of Texas at Arlington (UTA), May 2016.

B.Sc. in Electrical Engineering, Ahsanullah University of Science & Technology, July 2009.