Mohammed Fahim

(+1) 613 410 3066
faheem.muhd@gmail.com
Linkedin: https://www.linkedin.com/in/mohammadfaheem
Website: https://www.mohammedfaheem.com/

5+ years of experience as embedded electronics engineer
5+ years of experience in circuit designing and PCB layout designing
5+ years of experience In embedded C/C++

SKILLS

- *Micro-controllers:* PIC16F1788, ARM Cortex M3 LPC1788, ATMEGA 328P, ESP8266, ESP32

- *Hardware design:* Autodesk Eagle, KiCad, Altium designer,Cadence Allegro, PCB etching

- *Hardware communication protocols:* UART, I2C, SPI, RS485, RS232

- *Programming Languages***:** Embedded C, C++, Python, Java Script

- *Programming Frameworks***:** Android studio, Alexa skill Development, WordPress, Node.js

- *Wireless communication protocols*: Wi-fi, Zigbee and Z-wave

- *Network communication protocols*: MQTT, HTTP, IP

- *IDEs:* MPLAB X IDE, Arduino IDE, Eclipse, PyCharm

- *Sensors:* Accelerometer, Proximity, Temperature, Noise, Smoke, Light

EXPERIENCE

INTELLECTULOGY SOLUTIONS INC.   **Victoria, Canada**
R&D Engineer   *2021 – Present*

- Designing wireless power transfer system for electric vehicle charging.
- Creating Schematic and Board design for PCBs using Altium designer.
- Increased efficiency of wireless cell phone charger design by 11%.
- Created and tested more than 13 circuit prototypes and tested in span of 4 months.
- Wrote weekly reports and laboratory reports.
- Designed and performed coil simulation in ANSYS Maxwell Simulation Software.

VIBGYOR NEXTGEN TECHNOLOGY   **Bangalore, India**
Senior Embedded Electronics Engineer – Team lead   *2016 – 2021*

- Designed and developed more than 9 end to end wireless home automation IOT products in span of 4 years with a team of 5. Now used in more than 2000 homes.
- Created Schematic & PCB layout design for 9 home automation products using KiCAD.
- Designed energy monitoring smart node using ADE7757 IC.
- Programmed PIC, ARM and ATMEL micro controllers using C/C++ and Python.
- Worked with I2C, SPI, UART, RS484 and RS232 Communication protocols.
- Used Wi-fi,BLE , Zigbee and Z-wave for wireless communication.
- Wrote Alexa skill for Home Automation using Node.js in AWS.
- Handled client meetings and sales/marketing meetings and oversaw production design.

OTHER EXPERIENCE

UNIVERSITY OF OTTAWA   **Ottawa, Canada**
R&D Engineer   *2020 – 2021*

- Worked on multiple IOT/Embedded systems project; Smart Container, Rescue robot.
- Read various research papers, extracted information and documented it.
- Prototyped and worked with semiconductor devices and widely used circuits in Eagle CAD.
- Assisted with Lab equipment such as oscilloscopes, multimeters, Soldering machine etc.
- *Created Nodes:* TRIAC & Relay based multi-channel AC output controller.

President - Professional Development Club   *2020 – 2021*

- Managed a 200+ Memberf Club with 9 Teams.
- Created Industry collaborations for job, Placed 50+ students in 8 months.
- Conducted Professional 16 Workshops, 7 Events, 3 Trainigs.

PROJECTS

- Created android app for community called 'We Shia', available in play store now 1000+ downloads. Link to play store app: [We Shia - Apps on Google Play](#)
- *Pick and place wheeled robot:* Won 5th place in national level robotics competition.
- *Home automation Gateway:* An ARM Cortex - LPC1788 based multi-interface automation hub.
- *Home automation Nodes:* TRIAC & Relay based multi-channel AC output controller with dimmer.
- *Energy meter:* Pocket sized retrofit energy measuring module.
- *Touch Panels:* Capacitive touch-based switches to replace traditional mechanical switches.
- *Multi sensor module:* All in one Temperature, Humidity, Gas, Smoke, Light and Noise sensor.
- *RGB controller:* Smart PSMC technology-based LED color controller with inbuilt patterns.
- *Occupancy sensor module:* Intelligent PIR sensor module with diverse controls and notifications.
- *Geyser controller:* A 20Amps high power controller with live power monitoring capability.
- *IR blaster &IR reader:* Devices to read & send IR signals to control remote based appliances.
- *Scene Controller:* A touch-based device which can control multiple devices in one tap.
- *Smart mirror:* Touch integrated backlit mirror with inbuilt music player and digital clock.
- *Wardrobe/Door sensor:* Battery operated IR security device with mobile notifications.
- *PIC Development board:* A development board for PIC-16F1788 micro controller.
- *Bottle handling plant:* PLC programmed autonomous bottle handling plant.

EDUCATION

M.Eng. in Electrical and Computer Engineering
University of Ottawa, Canada
B.Eng. in Applied Electronics and Instrumentation
Chhattisgarh Swami Vivekanand technical University, India