MUHAMMAD ANZA KHAN

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EDUCATION

McGill University *Expected December 2019*
B.Eng. Electrical Engineering - **Internship Program**
James McGill Entrance Scholarship Recipient
Relevant Courses : Operating Systems, Computer Organization, Design Principles and Methods, Foundations Of Programming

TECHNICAL STRENGTHS

Programming Languages	C, C++, C#, Java, Python, XML, MIPS ISA, ARM Cortex -A9
Software & Tools	Git, Gerrit, Arduino, Unity, OpenCV, OpenGL, MATLAB
OS and General Software Packages	UNIX, Linux, QNX, Windows OS, Project Gantt, Hansoft

WORK EXPERIENCE

BlackBerry QNX, Ottawa, Canada May 2018 - August 2018
Software Developer Intern - ***Autonomous Car Team***

- Designed computer vision algorithms to assist in traffic sign detection for BlackBerry QNX autonomous car in embedded C language
- Created a background noise reduction algorithm to remove trees from the background, assisting in sign detection
- Wrote a faster edge detection algorithm to help isolate points of interest on the street
- Wrote a resource manager to integrate the various sensor units with the car's computer vision stack
- Rewrote the existing radar unit code to allow radar data to be displayed on the car's screen
- Worked with lidar unit to display point cloud data on a 2D screen, this recreated the 3D world on the car's display

Ericsson, Ottawa, Canada January 2017 - December 2017
4G/5G Software Developer Intern

- Developed software for baseband in C language on a multicore real time embedded system
- Developed software in an Agile software developing environment
- Learned about the basic role of layer 2 software with Ericsson's LTE wireless product
- Optimized unit tests for signal transmission between LTE Protocol Stack Layer using C
- Managed transition of Narrowband Internet of Things (NB-IoT) code from 4G to 5G architecture
- Used HTML, CSS, and Markdown to facilitate conversion of test documentation from manual to automated format
- Wrote a Python script that enabled Erlang support for Doxygen to enable documentation of Erlang test code
- Used Java to implement and simulate LTE User Plane Control Scheduling Algorithms using Ericsson proprietary simulation software

DESIGN PROJECTS

McGill ECSESS RoboElectronics September 2015 - December 2015
Design Team Member

- Part of a team of 5 students tasked with designing a robot with the purpose of balancing a see-saw
- Worked in the hardware team and designed a rudimentary drivetrain for the robot
- Learnt how to program microcontroller PIC16F88 in C language

Arduino Ambient Temperature Sensor Circuit April 2017
Personal Project

- Designed an ambient temperature sensing circuit, which was programmed in C on an Arduino board
- TMP36 temperature sensor was used due to its voltage changes having a linear relation with temperature changes
- Different colored LEDs would flash indicating changes in temperature