



NAYEF AHMED

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EXPERIENCE

- **Microsoft Corporation** | Software Engineer Intern
C#, Go, Redis, Azure | Redmond, WA | Aug 2018 - Present
 - Currently working on the Azure OneBranch team to add and improve ownership enforcement features within Visual Studio Team Services
- **Watonomous (Self-Driving Car)** | Path Planning Engineer
C++, OpenCV, CMake | Waterloo, ON | Sep 2017 - Aug 2018
 - Worked within Path Planning subteam to transform a Chevrolet Bolt EV into a **level 4 autonomous vehicle** for the SAE AutoDrive Challenge
 - Implemented **path visualization algorithms using ROS and Rviz** to display the path of the car generated using a trajectory rollout approach
- **Microsoft Corporation** | Software Engineer Intern
C#, C++, XAML, HoloLens | Vancouver, BC | Jan - Apr 2018
 - Worked on Mixed Reality Viewer team to create a default Windows and HoloLens app for viewing 3D content with **over 3 million monthly users**
 - Integrated 3D asset conversion/optimization pipeline into app to support all 3D file formats while ensuring it adhered to the MVVM design pattern
 - Collaborated with UI/UX designers and data analysts to implement a new content promotion system, **increasing user retention by over 35%**
- **Unicell Body Company** | Full-Stack Developer
Java, MySQL, React Native | Toronto, ON | May - Aug 2017
 - Expanded business-facing company website **utilized by over 1000 employees** using the LAMP stack, Laravel, and Vue.js
 - Automated core data processing using Selenium, resulting in **60% increased efficiency** in chassis inventory management

PROJECTS

- **Flappy Goose** | RTOS Game in an Embedded Environment
C, Keil RTX RTOS, LPC1768 Microcontroller | Jun - Jul 2018
 - Recreated Flappy Bird game using Keil MCB1700 board in a real-time OS
 - Used **task synchronization and interrupts** to update LCD graphics, player score, game physics, and handle peripheral I/O simultaneously
- **Study Space** | PennApps XVI (Google Prize Winner)
Android Things, Java, Firebase | Sep 2017
 - Created IoT device and companion app to display the number of people in specific locations on campus
 - Determined area occupancy using **'Android Nearby' to discover nearby wireless devices**
- **SmartGlove** | IEEE Hardware Hackathon (3rd Place Winner)
Arduino, C, Gyroscope/Accelerometer | Feb 2017
 - Designed glove to wirelessly **control IoT devices** using simple gestures
 - Manipulated devices, including lights and speakers, by sending commands through TCP local WiFi socket using two Arduino Nanos

SKILLS

- **Languages**
 - C++
 - C#
 - Java
 - PHP
 - C
 - Python
 - JavaScript
 - XAML
- **Technologies/Frameworks**
 - OpenCV
 - LAMP Stack
 - .NET Core
 - ROS
 - Node.js
 - React Native
- **Tools**
 - Git
 - Arduino
 - Unity
 - Azure
 - Unix
 - VSTS

EDUCATION

- **University of Waterloo**
2016 - 2021
BAsC in Honours Mechatronics Engineering Co-op
- **Relevant Courses**
 - Real Time Operating Systems
 - Microprocessors and Digital Logic
 - Data Structures and Algorithms
 - Sensors and Instrumentation
 - Digital Computation

ACCOMPLISHMENTS

- - President's Scholarship of Distinction
 - Chancellor's Scholarship
 - TDSB Top Scholar (99.3% avg)
 - Richard Kiyonaga Award
 - 2nd Place Microsoft Intern Smash Tournament

HOBBIES/INTERESTS

- - Varsity Ultimate
 - Road Biking
 - Hiking
 - Speedcubing
 - Snowboarding
 - Robotics