

Yousuf Ali

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Education

University of Waterloo
Bachelor of Applied Science (Engineering)
Electrical & Computer Engineering
Fall 2017 - Winter 2022

Cumulative GPA: 3.97

Awards:

- Dean's Honors List
- Rank 1 (Highest Academic Standing)
- First in Class Engineering Scholarship
- Engineering Intl. Student Scholarship
- President's Scholarship of Distinction
- Distinction | Euclid Math Contest

Skills

Programming

C++ / C · Java · Python · Assembly · SQL
MATLAB · Ruby · JavaScript · LATEX
Bash Scripting · HTML · CSS · PHP · VHDL

Tools

TensorFlow · Keras · Git · Gerrit
Visual Studio · Jenkins · Jira · PCB Design
(KiCAD & EAGLE) · Android Studio · VM Box
Arduino · Putty · NetBeans · Quartus Prime
Eclipse · MS Office Suite

Coursework

Undergraduate

Computer Architecture & Processors (ARM)
Data Structures and Algorithms (Grade: 100)
Electronic Circuits
Embedded Microprocessor Systems
Electricity and Magnetism (Grade: 99)
Numerical Methods and Analysis (Grade: 100)
Discrete Math and Logic (Grade: 100)
Object Oriented Software Engineering
Digital Circuits and Systems
Linear Algebra and Advanced Calculus

Online and Self-Learning

AI Programming
Machine Learning

Experience

WATonomous | Lead, Power Systems Jan 2019 – Apr 2019
Developer, Perception & Object Detection Feb 2019 – Present
Lead, Electrical Team Apr 2019 – Present

- ▶ Optimized power distribution and scalability of sensors such as LiDARs, RADARs, and Cameras in autonomous vehicles
- ▶ Designed PCBs that improve RADAR efficiency by over 10% and reduce electrical debugging time
- ▶ Implemented object detection algorithms such as YOLO v3 using C++

BlackBerry | AI and Automation Development Jan 2019 – Present

- ▶ Developed automated API and user interface test cases for BlackBerry Security and Productivity applications using Java, C++, and Python
- ▶ Led the development and presentation of large-scale Artificial Intelligence workshops to employees
- ▶ Developed data science applications to improve automation coverage with respect to real user coverage

University of Waterloo | Undergraduate Research Assistant Sep 2018 – Dec 2018

- ▶ Researched and developed efficient algorithms for concurrent data transfer across servers using C++ (systems network and socket programming)

BlackBerry | Software Testing & Development May 2018 - Aug 2018

- ▶ Developed automated and manual test cases for BlackBerry apps using UIAutomator and Espresso frameworks in Java
- ▶ Innovated new features for BlackBerry Hub+ Inbox and Privacy Shade
- ▶ Improved testing efficiency by over 20% by developing testing tools using Java and Python

Waterloo Formula Electric | Embedded Software Developer Sep 2017 - April 2018

- ▶ Developed algorithms for hardware integration on ARM Processor
- ▶ Designed circuits schematics, breadboarded, and troubleshoot circuits used by team (e.g. Control Area Networks, etc.)

Projects

Neural Network API | AI Project Sep 2018 - Present

- ▶ Developed a deep neural network (DNN) API using Java to use in applications such as object detection, character recognition, greedy algorithm development
- ▶ Incorporate common layer types, activation functions, and loss functions into API such as cross entropy loss, ReLU, etc.

Vision Gate (Winning Hack) | EngHack 2018 May 2018 - Jun 2018

- ▶ Introduced a unique way of navigation for the visually impaired eliminating the need for canes by incorporating circuitry, and C++ programming on Arduino
- ▶ Won the Top 3 Teams Award for creativity, technical implementation, demo, and execution

Omega VR Glove | Finger Tracking Glove Sep 2017 - Dec 2017

- ▶ Devised a wireless glove that tracks the motion of fingers for use in VR Apps using C++ on Onion Omega2 IoT board