WALEED AHMED

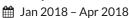✉ w29ahmed@edu.uwaterloo.ca   ☎ 647-708-7272   in linkedin.com/in/waleed-a   ⌂ github.com/w29ahmed

EXPERIENCE

Industrial Imaging Software Developer
P&P Optica

📅 Jan 2018 – Apr 2018   📍 Waterloo, ON

- Developed software for industrial imaging applications on **Linux** machines with **Git** version control in an **Agile** environment
- Implemented image correction algorithms and post-processing for industrial cameras in **Python** using **Numpy**, **OpenCV**, and **Matplotlib**
- Refactored data handling modules for efficient file input/output and wrote unit tests for them in **Python** using **Pytest**
- Refactored camera control modules in **C/C++** that use the **Camera Link** serial protocol to interface with the camera for control purposes
- Documented software design decisions and a troubleshooting guide to efficiently debug issues pertaining to image acquisition

Simulations Lab Assistant
University of Waterloo

📅 May 2017 – Aug 2017   📍 Waterloo, ON

- Simulated thermal management systems in **COMSOL Multiphysics** to be integrated with high power laser diodes in order to maximize device lifetime and performance
- Conducted literature review on state-of-the-art semiconductor devices and cooling techniques
- Wrote technical report on results and analysis of simulation data; accepted for publication as an **IEEE** conference paper

PROJECTS

Arduino Jukebox
⌂ github.com/w29ahmed/Arduino-JukeBox

- Programmed in **C++** to use analog input from a variable resistor to cycle through a list of songs displayed on a 16x2 LCD screen
- Songs are hard coded frequency patterns digitally sent to a piezoelectric speaker

Arduino Voltmeter
⌂ github.com/w29ahmed/Arduino-Voltmeter

- Programmed in **C++** to utilize a voltage divider circuit in order to read voltages up to 500 V with an error of $\pm 1.4\,\%$, displayed on a 16x2 LCD

Toronto Raptors Image Classifier
⌂ github.com/w29ahmed/toronto-raptors-classifier

- Utilized transfer learning on Google's Inception v3 image classifier to identify players on the Toronto Raptors using **TensorFlow**, an open source machine learning framework in **Python**

Android Notes App
⌂ github.com/w29ahmed/Notes_App

- Simple but efficient note taking app for Android API levels 15 and above constructed using **Java**, **XML**, and an **SQLite Database**

SKILLS

Python   C++   MATLAB   Java
SQLite   Git   Linux
Microcontrollers
COMSOL Multiphysics

EXTRACURRICULAR

Marketing Director
NanoRobotics Group

📅 Oct 2016 – Current

- Responsible for in-team logistics such as funding allocation, business proposals, and delegation of administrative tasks to ensure functional team structure
- Acquired **$4000+** in funding and sponsorships through pitching proposals

Orientation Leader
University of Waterloo

📅 Aug 2017 – Sept 2017

- Front-line leader responsible for directly interacting with first years and leading them throughout orientation week events

INTERESTS

Arduino   Image Processing
Machine Vision   Hyperspectral Imaging
Software Development   Self-learning
Basketball   Toronto Raptors

EDUCATION

B.ASc Computer Engineering
University of Waterloo

📅 2017-2022

- Relevant courses: Engineering Computing (**Python**), Computer Science 2 (**Python**), Discrete Math (**C++**), Computational Methods (**MATLAB**)
- Excellent academic standing in top 25%
- Cumulative GPA: 3.7/4