Nathan Yohannes

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EDUCATION

Ontario Tech University • Software Engineering Graduating 2023
(Relevant courses: Linear Algebra for Engineers, Intro To AI, Algorithm Design and Analysis, Discrete Math)

EXPERIENCE

Woburn Robotics • Student Head of Controls Systems, Co-President, and Mentor 2015 – Present
- Developed Java code for robot subsystem control
- Provided critical problem solving under sensitive time constraints
- On-the-fly learning and rapid development was a necessity
- Utilized PID loops to control target approaches with different robot mechanisms
- Extensively documented and reviewed code to push into codebase
- Micromanage electronics subgroups with a focus on detail

Caution Tape Robotics • Instructor 2020 – Present
- Used past robotics experience in prototyping a large-scale AI part sorting machine
- Built an image classifier using PyTorch for ML to detect specific parts
- Taught AI Fundamentals to students in grades 11-12
- Developed and taught robot-C/Python code to 30+ students of differing skill levels
- Utilized PID Control loops for target approach with robot mechanisms
- Simplified and demonstrated several complex robotics mechanisms to classes

Ontario Tech University • Engineering Outreach Summer 2021
- Analyzed/visualized CSV survey data using Python
- Walked students through intermediate Python problems, concepts, and solutions
- Scheduled meetings amongst coworkers and provided succinct overviews to managers

SKILLS

Java	• Large team/codebase for competitive robotics
C#	• Several Unity game development projects (Dog-fighters, puzzle games, testing)
Python	• Google ML Vision for AI part sorter
C/C++	• Projects using threading, assembly language
PyTorch	• Custom image classifier to detect vex-IQ parts

Application of Skills

Team Skills
- Student president and mentor of high-performing competitive robotics team
- Communicated with team leaders and mentors with frequent meeting
- Streamlined organization for competitions using excel and google sheets
- Designed and delivered software workshops for robotics
- Team presentations at engineering design hackathons
- Quickly understand and explain topics at varying levels

Software Development
- Object detection using Google's Machine Learning Vision API
- Object oriented Java development for robotics
- Full stack development on a car rental website
- Automated testing using JUnit testing
- PyTorch for machine learning to build an image classifier

AWARDS

Ontario Chairmans Semi-Finalist	**Individual Robotics Award**	**Team Autonomous Award**
Ryerson University	Woburn CI	Ford
2019	2019	2019