Anita Hu

1A Mechatronics Engineering Student

✉ anita.hu@uwaterloo.ca
📞 (289) 395-0690
in linkedin.com/in/anitahu113
○ github.com/anita-hu

PROJECTS

TRAFFIC LIGHT DETECTION | Watonomous — Sept. 2018 – Present
Python, C++, OpenCV, Tensorflow, Machine Learning
- Generated images from limited data using data augmentation
- Trained Tensorflow models to classify 4 different types of traffic lights
- Determined traffic light state using OpenCV image processing functions

VISION AI | Hack the 6ix 🏆 — Aug. 2018
Python, OpenCV, Flask, Tensorflow, Google API
- Designed wearable to aid the visually impaired with environment description and image to text modules
- Used Google Assistant to issue commands and return voice responses after images are processed on a cloud server

FACE RECOGNITION DOOR | Self-study — Jul. 2018
Python, OpenCV, Arduino, Tkinter, SQLite
- Designed Tkinter UI to control processes with simple buttons
- Used OpenCV LBPH Face recognizer to train captured images and output a .yml file for face recognition
- Utilized SQLite database to store names in key-value pairs

PRESENTATION BUDDY | JAMHacks2 — May 2018
Python, OpenCV, Flask, HTML, CSS, JavaScript
- Designed Flask website to give real-time feedback to presentations
- Contains Javascript timer, randomized tips and live OpenCV stream
- Used OpenCV to give feedback on user's facial expression

BIT TO BIN | Hack the North 🏆 — Sep. 2017
Python, OpenCV, Arduino, Clarifai
- Used OpenCV with Clarifai API image recognition to sort waste into 3 categories as each item is placed on the opening platform
- Aligned bin lid servos to allow items to roll into the correct bin when dropped from the opening platform

EXPERIENCE

CAMP COUNSELLOR | Full-time — Jul. 2017 – Sep. 2017
Town of Newmarket
- Led age appropriate games, songs and crafts for 25+ campers
- Assisted in direction and supervision of campers during activities
- Responsible for all accident/incident reports and follow up

MATH CLUB PRESIDENT — Feb. 2017 – Jun. 2018
Sacred Heart Catholic High School
- Students explore math concepts beyond the curriculum and work on problems in preparation for upcoming math contests
- Led weekly meetings and notified teachers ahead about meeting plans
- Worked with teachers to organize events such as a guest speaker from Waterloo and a team competition against other schools

PEER TUTOR — Sep. 2016 - Jun. 2018
Sacred Heart Catholic High School
- Tutored students from Grades 9 to 12 in Science and Math courses
- Assisted students with homework, projects and test preparation

SKILLS

LANGUAGES
Python • C/C++ • HTML5 • CSS3 • JavaScript • Arduino

TOOLS
AutoCAD • SolidWorks • OpenCV • Illustrator • Photoshop

SOFT SKILLS
Leadership • Teamwork • Communication Time management

AWARDS

BEST LEARN IN HACK — 2018
Hack the 6ix category prize

SCIENCE SCHOLARSHIP — 2018
Community-minded & excellency in Math & Science

GE STAR SCHOLARSHIP — 2018
US $3,000 value

HACK THE NORTH FINALIST
Out of 1000 participants — 2017

EDUCATION

UNIVERSITY OF WATERLOO
Mechatronics Engineering
Honors Co-op, 2018 - 2023
- President's Scholarship of Distinction

INTERESTS

MUSIC COMPOSITION
Composed ~30 pieces of contemporary music for piano
Runs a YouTube channel for my piano compositions and song covers with ~200 subscribers

SHEET MUSIC
Transcribes sheet music for a variety of music
Shares sheet music on Sheethost account with ~900 followers