

YAN-QING WU

University of Waterloo | Computer Engineering – 1B

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Summary of Qualifications

- **Programming Languages:** C++, Python, Java, VHDL, C, HTML, CSS
- **Frameworks/Libraries:** Ubuntu Linux OS, Windows OS, ROS, Android, OpenCV, jQuery
- **Technologies/IDEs:** Git, Android Studio, Quartus Prime, Visual Studio, Arduino
- Excellent time management skills acquired through active involvement in various extracurricular activities
- Hard-working and diligent individual who has a passion for new technologies
- Experienced with building Android app and static website

Side Projects

Real-Time Tennis Ball Tracking – A program that tracks movements of tennis balls from a camera input
Python | Matlab | OpenCV

- Built a program using Contour tracking algorithms that achieves target object in each video frame
- Implemented Watershed algorithm to segment touching or overlapping balls so that multiple balls can be detected
- Enhanced the result of tracking via thresholding and applying erosions and dilations.

pwylq's Space – A personal static website build in progress

HTML | CSS | JavaScript

- Created a static website which based on Github Page
- Implemented Google Analytics to track website visits, and Disqus to enable users to comment

Line Following Music Player – A robot that can auto-maneuver and convert greyscale stripes to music notes

- Designed and implemented an electric circuit of the robot, including R2R Bridge design that performs digital-to-analog conversion to drive speaker, and filtering circuit design that enhances signals to output clear music notes
- Assembled the robot by soldering necessary components and wiring up motors, speaker and sensors
- Participated in the selection and purchase of every electronic and mechanical components of the robot

Experience & Activities

ELECTRIC CITY HACKS | Team *journalé* Peterborough, ON | November 2016

Python | Java | MySQL

- Built a **social Android app** with real-time map system built in 36 hours with all first-time hacker teammates
- Developed backend server code of the app to enhance the security of user's information via hashing and salting
- Debugged the creation and validation of user via creating and examining numerous test cases

UW Robotics Team | Software Team Waterloo, ON | September 2016 – Present

- Contributed in the project of **Mars Rover 2017** with a group over 50 members who comes from various majors
- Built an object tracking program to track moving object from camera input

Volunteering

Hack the North | Floor Patrol & Food Waterloo, ON | September 2016

- Assisted hundreds of hackers during the event and answered most arose questions
- Set up food station and distributed lunch to more than 1,000 participants with fellow volunteers

Additional

Languages: native proficiency in Mandarin

Interests: basketball (10 years+), pencil sketching, running, chess, board games