

Cherry Zhang

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EDUCATION

University of Waterloo – Candidate for BaSc. in Mechatronics Engineering with an Intended Minor in Computer Science (2019)

- Cumulative Average – 91.2%
- Engineering Dean's List – Ranked 4th out of over 135 students

SKILLS

Software

- Experienced: Android (Java), Windows (C#)
- Familiar: iOS (Swift), Machine Learning (MATLAB, Python), Arduino, C/C++
- Basic: Python, VBA, HTML, CSS, JS

Computer Aided Design

- Basic AutoCAD and SOLIDWORKS

Languages

- Fluent in English; Intermediate in Japanese; Basic Chinese and French

Other

- Research, Technical Writing

WORK & RESEARCH EXPERIENCE

Research Assistant - Prof. McKay (Dept. Management Sciences) (January 2014 – April 2014)

- Developed a mobile Android app to assist the rehabilitation of people who have suffered a specific type of stroke (reading disorder – pure alexia)
- Researched and read known literature of attempted rehabilitative techniques and their efficacies; summarized these findings in a literature review
- Responsible for the full software life cycle: research paper on problem, functional specification, design specification, code development, test process, user manual, validation with stroke patient (documentation exceeded 150 pages)

Microsoft - Software Engineering Intern - Tokyo (November 2014 – December 2014)

- Designed and implemented various algorithms and data structures for generating suggested content in the form of mini photo albums from the user's device's photo album based on the metadata of each photo
- Improved the UI and UX experience on the Android client application, creating custom gestures features, animations, UI elements, etc.

Microsoft - Software Engineering Intern – Tokyo (May 2015-August 2015)

- Worked on the Windows 10 version of Office Lens, an image processing app that can scan documents, whiteboards, etc. on your mobile device with real-time edge detection
- Was the sole developer for a majority of this version of this app's features, and developed most of the software design, including: working with the camera and orientation sensor, UI, integration of the image processing libraries, optimization and testing of the speed of the image processing and real-time edge detection, concurrency, memory optimization and management, image encoding/decoding, OneNote service integration, fixing bugs, etc.

Research Assistant - Prof. McKay (Dept. Management Sciences) (May 2016 – August 2016)

- Continued the research for the rehabilitative application for pure alexics
 - Integrating data aggregation and analytics for researchers of this disorder, and aiming to become the lead author on a published conference paper on this topic
- Started new project with Dr. Marsha Linehan of the University of Washington and the Linehan Institute
 - Creating a software application that is used alongside traditional dialectical behavioral therapy (DBT - used to treat people with various mental health illnesses) on iOS and LAMP stack

SIDE PROJECTS (FULL LIST ON MY WEBSITE)

- **Machine Learning**
 - Completed machine learning course (Stanford/Coursera)
 - Several projects including: recipe recommender, predicting survival on Titanic, digit recognition with neural network (MNIST dataset)
 - Ongoing project to build a self-driving car using convolutional neural networks & imitation learning (paper on algorithm is [here](#))
- **AI for Robotics Course** (CS 373 from Georgia Tech/Udacity) (Ongoing)
 - Learned: Monte Carlo Localization, Kalman Filters
 - Will Learn: Particle Filters, Search, PID Control, and SLAM
- **Hackathons**
 - Diagnostic and rehabilitative app for foot/gait problems (using a sock with pressure sensors and accelerometers, and a Pebble Watch) (PennApps 2015)
 - Multi-platform Android fitness application (ChromeCast/Android TV, Mobile, and Wear) (Finalists at JPHacks 2014)
 - Bluetooth chat system that prevents harassment on Japanese trains (Top 5 in Japan TechCrunch 2014)
- HTML parser (created the algorithm independently when first learning programming)

EXTRACURRICULARS & VOLUNTEERING

- Mentor at hackathons and an ideathon (DMTC and Microsoft – Fall 2014, Summer 2015)
- Engineering and Robotics Outreach (RoboGals & UW - Winter 2014, Summer & Fall 2015)

HOBBIES & INTERESTS

- Blogging
 - I have blogged about various subjects including: basic edge detection, an intro to the knapsack problem, an intro to asymmetric cryptography, other mathematics and science related subjects, but also about art, philosophy, and history
- European history and philosophy

AWARDS

- 2015 President's Research Award (first year average at least > 80% and for doing a research assistantship during study term)
- 2014 International Experience Award (first year average at least > 80% & international internship)
- 2013 President's Scholarship of Distinction (entrance average of at least > 95%)
- 2013 Dr. B. Mabel Dunham Award (highest average in high school among females)
- 2011 Business/Entrepreneurship Award (for computer science studies)
- 2011 Gold Medal in Waterloo Science and Engineering Fair for Biotechnology