

# Olivia Kim

3A Mechatronics Engineering  
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## SUMMARY OF QUALIFICATIONS

- Proficient in Python and C++ programming languages; familiar with C
- Working knowledge of Machine learning and natural language processing technologies, such as NLTK, scikit learn and SciPy
- Comfortable with PostgreSQL, Redis, Celery and development in a Linux system environment
- Experience with OpenCV and image processing techniques
- Highly experienced with various web development technologies including HTML, CSS, JavaScript, JQuery, and Django

## PERSONAL PROJECTS

### Pixel Perfect Piece of Pizza Bot (PPPPB)

The Pixel Perfect Piece of Pizza bot is a web-based chat bot that provides a quick and easy way to order pizza. One can engage in a conversation with the PPPPB, and will be asked a series of questions regarding their order, rather than filling out long on-line forms or ordering pizza via phone.

### The Catasort

The Catasort is a robotic candy sorting machine that catapults different colored candy into their respective bins based on color. This project was created using various Lego Mindstorms sensors and was written in Robot C. This project was created organically, beginning with a self-created mechanical design. This design then came to life in Waterloo's machine shop and was integrated with the software.

### In The Loop

In The Loop is a mobile app for Android that combines all categories of news into one simple interface. A short 20-60 second video on each topic at the touch of a button allows for commuters, students and busy individuals to stay "In The Loop" at all times.

### Screen Recorder

A command-line tool for Linux that allows both audio and video streams from a user's screen to be captured, combined, and saved in video format. The area of the screen that will be recorded may be selected via a simple UI enabling the user to drag and select the region of interest.

### Bus Times Chrome Extension

A simple chrome extension written in Python and integrated with Django and PostgreSQL. This simple app pulls the latest bus times from the GRT public data feed and calculates the arrival times of the next 3 busses.

## EMPLOYMENT

### Software Engineer

ARB Labs, Toronto, ON, Jan – May. 2016

- Designed and implemented a data assembly and serial device synchronization system
- Created a library for interfacing between Python and C++ modules of the codebase
- Implemented a chat bot running on a simple HTTP server to receive GitHub notifications and relay them to team members
- Developed a C++ module to capture images from different angles and transform them to attain images with the same camera perspective

### Full Stack Developer/Software Engineer

Wriber Inc., Kitchener, ON, May – Sept. 2015

- Performed data and regression analysis to form a learned ranking model
- Improved named entity recognition and part of speech tagging techniques
- Created dynamic analytics dashboard to display user statistics in graphical, tabular and visually appealing forms
- Implemented dynamic, team-based interfaces to view document lists with real time changes

### Software Developer

Lockheed Martin Canada (LMC), Halifax, NS, Sept. – Dec. 2014

- Implemented 3d logic to animate software representations of mechanical parts
- Designed and integrated classes and factories to simplify and eliminate duplicate code
- Designed and implemented graphical user interface (GUI) components of the simulation to further enhance the user experience
- Studied and examined the functionality of the mechanism being simulated in order to fully understand and accurately implement its software representation
- Fixed and created unit tests using the Mockito mock library

## AWARDS AND ACHIEVEMENTS

- **First Place Hack at Kik Hackathon** – Awarded to the “Pixel Perfect Pizza Bot” at the Kik Hackathon hosted at the University of Waterloo (Feb. 2015)
- **Geographers Without Borders Sponsor Award** – Awarded to “In the Loop” mobile application at Delta Hacks hosted at Macmaster University (Feb. 2015)