Celina **Tang**

Software Engineering

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Languages & Tools

Languages C / C++, Java, JavaScript, Python, Groovy, Scala, HTML / CSS

Frameworks & Tools ROS, React, Flask, Spring, Maven, Selenium, OpenCV, Git, Bash

Experience

Avidbots Corp

Waterloo, ON

Software Developer - Path Planning | C++ *Sep 2018 - Dec 2018*

Veeva Systems

Toronto, ON

Software Engineer | Java & Groovy *Jan 2018 - Apr 2018*

- Performed **optical character recognition** and table extraction methods to obtain 75,000+ records from scanned PDFs
- Sanitized raw data with an ETL pipeline and utilized **fuzzy matching** techniques to achieve a **90% match rate** with internal databases
- Automated data collection of over 50 sites with Selenium scripts
- Trained OpenCV HAAR cascade classifiers for **facial detection** of 100,000+ image datasets
- Created interactive Selenium UI and integration tests for Spring web application

Accedo

Toronto, ON

Multi-Platform Developer | BrightScript *May 2017 - Sep 2017*

- Developed UI for playlist playback with skipping, replay, and fast-forward functionalities
- Enhanced user login system to incorporate personalized features such as curated playlists
- Refactored API structure to **reduce redundant calls** and provide extended access to premium user accounts

Quanser Consultant Inc.

Markham, ON

Software Developer | C++ & LabView *Jul 2015 – Aug 2015*

- Incorporated dead reckoning with positional information from SPI encoders and gyroscope calculations to track robot movement
- Developed an **object tracking system** by analyzing RGB data obtained from the Xbox360 Kinect
- Constructed dynamic depth map of robot's immediate surroundings through analysis of **infrared ray casts**

FIRST Robotics Team 4001

Thornhill, ON

Team Captain & Lead Programmer | LabView *Sep 2012 – Jun 2016*

- Led a team of 85 members to win FIRST Robotics Competition Toronto Regional and **placed top 10 in the World Championship**
- **Improved robot performance by over 40%** through an automated control program with Proportional Integral Derivative control
- Received Engineering Inspiration, Creativity, and Industrial Design Awards for innovative robot design

Projects

RaspyMusic

Python & Raspberry Pi

- Created a home music web application hosted on a Raspberry Pi with a Flask backend for song submissions
- Used Raspberry Pi's GPIO for song playback

WLP4 Compiler

Scala & MIPS Assembly

- Compiled WLP4 language into MIPS machine code with LR(1) parser
- Detected syntax, semantic, and lexicographic errors with context-sensitive analysis
- Supported nested functions, pointer allocation, linkers and loaders, and automatic garbage collection

Education

University of Waterloo

Waterloo, ON

Bachelor of Software Engineering *2016 - 2021*