

Celina Hao Tang

UNIVERSITY OF WATERLOO – SOFTWARE ENGINEERING

Work Experience

Accedo – Multiplatform Developer, Toronto, ON

May 2017 – Aug 2017

- Prototyped 7+ new on-demand features with Roku SDK 2.0 for Roku TV streaming app, such as scene-based trick-mode and curated playlists based on user preferences
- Optimized application rendering by 20% using occlusion culling and Z-buffering
- Created reusable BrightScript components for dynamic display and received a high degree of client satisfaction upon demo presentation
- Implemented RESTful API calls to retrieve playback metadata and update user status
- Worked under Agile methodology for streamlined development and collaboration

Quanser Consultant Inc. – Software Developer, Markham, ON

Jul 2015 – Aug 2015

- Used dead reckoning with XY coordinates from encoders and gyroscope calculations to accurately track and efficiently transfer robot position over network
- Developed an image processing program with the Image Acquisition and Processing library to analyze RGB data with the Xbox360 Kinect
- Analyzed depth data and successfully manipulated the acquired data to map the surrounding area, which is used in the path planning algorithm
- Presented at National Instrument Week in Texas at the product launch demo

Projects

BoosterCat

Sep 2016 – Nov 2016

- Implemented an immersive pet simulator on the Tiva C Launchpad
- Retrieved data from the accelerometer and temperature sensor to simulate the actions of petting, feeding, and cleaning
- Utilized the LCD screen for displaying game content and user interface

Extracurricular

FIRST Robotics Team 4001 – Team Captain & Lead Programmer

Sep 2012 – Jun 2016

- Led a team of 85 members to win FIRST Robotics Competition Greater Toronto Central Regional and competed in the World Championship quarterfinals
- Developed an automated control program with Proportional Integral Derivative control, which improved robot performance on scoring by 40%
- Presented robot design, programming logic, and mechanics to the judges, which won Engineering Inspiration Award, Creativity Award, and Industrial Design Award
- Taught introductory lessons on programming to 40 different high schools in the region

The Axiom School Newspaper – Editor-in-Chief

Sep 2012 – Jun 2016

- Supervised a team of 35 members to write articles on school-wide events, global issues, and club activities, and successfully reached 100+ monthly views
- Edited articles and other materials submitted for publication to improve readability

 github.com/celina-tang

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Technical Skills

Languages

C/C++

Python

LabVIEW

Web Development

HTML

CSS

RESTful APIs

JavaScript/jQuery

Hardware

Arduino

National Instruments:

roboRIO, myRIO

Xbox 360 Kinect

Roku

Education

Candidate for Bachelor of Software Engineering

University of Waterloo

Waterloo, ON

Expected Graduation Date: 2021

Interests

ART: watercolor/acrylic painting, sketching, photography

GAMES: Elder Scrolls V: Skyrim, Beholder, Witcher 3: The Wild Hunt, Don't Starve Together