

Kieran Broekhoven

4A Mechatronics Engineering

University of Waterloo

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Technical Skills

Languages & Frameworks

Fluent: C++ Python
C Bash

ROS MatLab

Experienced: C# Django
Batch OpenGL

OS: Windows, Ubuntu, OS X

Design Software: AutoCAD,
SolidWorks, MIMICS, 3-Matic

Other: Git, SVN, Vim, JSON,
Visual Studio, Arduino

Projects

TALK-LOCK: Sept 2017 - Apr 2018

Application Software Lead & PM

Bike rack with built-in locking that
communicates with smartphone

MTE 380: Jan - Apr 2017

Software Lead

Autonomous robot that traverses
over a ramp and locates an object

Activities and Interests

Arts: Director, performer,
choreographer, musician

Recreation: volleyball, snowboarding,
martial arts

Student life: student politician &
leader, dance teacher, orientation
leader, Graduation Committee

Work Experience

Test Automation Developer - Apple Inc. Special Projects

May - August 2017, Ottawa, ON

- Working on a test automation framework for a real-time embedded system, creating new features and debugging failures
- Independently designing and implementing a failure diagnostics library in Python for a hardware communication system
- Automating various test processes with Bash and Python scripts

Software Developer - IGNIS Innovation

September – December 2016, Waterloo, ON

- Developing OpenGL (C++) and .NET (C#) software for an application interfacing with organic LED screens
- Debugging issues in OpenGL and .NET
- Refactoring code and restructuring architecture to create a more readable and efficient code base
- Organizing the company foosball tournament

Test Engineering Analyst (Software) – Clearpath

January – April 2016, Kitchener, ON

- Creating a Django application to monitor a set of servers that each control a fleet of robots.
- Writing Python extensions to Sentry, a crash reporting software, to automate company processes.
- Replacing manual tasks with Bash and Python scripts.

Build Master Intern - Radialpoint, Inc.

May – August 2015, Montreal, QC

- Designing and implementing a system using Python that automates the process of setting up virtual machines on several physical build machines.
- Creating a web service that allowed employees to utilize the system with an intuitive interface.
- Assisting developers with problems they encountered in the company's build system.

Previous Employment

- Biomechanical Design, Soochow University
- Research Assistant, UWaterloo Neurorobotics Lab
- Karate Instructor, 6-12 year olds

