## **Ross Hill**

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## **Education**

Honours Bachelor of Computing, Software Design Queen's University, Kingston, Ontario Degree anticipated May 2020

# **Software Projects**

## **Mandelbrot Set Visualizer (Python)**

2016

This project is a clickable, interactive Mandelbrot set, made with Python 3, and the PIL and Tkinter modules. The colour palette is randomly generated. The Mandelbrot set is a famous example of a fractal in mathematics. The Mandelbrot set is a visualization of an equation involving complex numbers. Graphing said equation by hand would take years, but with a computer it takes seconds.

https://github.com/rosslh/Interactive-Python-Mandelbrot

## **Firefox Webextension (Javascript)**

2016

HidePass is a security extension for Firefox which hides the asterisks normally shown when entering a password, so that the length of one's password cannot be determined. An attacker knowing the length of one's password greatly decreases the number of guesses the attacker has to do in order to crack your password. Hiding the length of your password prevents this. This is especially helpful for those who need to enter their passwords while their screen is on projector.

https://github.com/rosslh/hidepass

# Smart URL Shortener (Python / Django / PostgreSQL)

2015

Justlink.co is a website that provides a unique way to quickly link websites whose URLs you have forgotten. Written in Python using the Django framework, you simply need to type "justlink.co/your-description-here". Justlink.co takes your description and queries a search engine for its first result. It then redirects you to that result.

https://github.com/rosslh/justlink.co

# **Work Experience**

# Walkhome Service Staff, Queen's University

September 2016 - Present

Walkhome is a Queen's student-run service that provides safe walks to students on and near the Queen's University campus. As a service staff member, I was expected to be personable and make good conversation, while ensuring the comfort of my patrons.

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### Ski Coach / Ski Instructor, Caledon Ski Club

Winters, 2013 - 2016

Working in Alpine Development at Caledon Ski Club, I have taught children ages two to ten how to ski, from their very first time on skis to racing competitively. Through this job I have gained experience in leading medium-size groups and working with children.

#### **Counseling Staff, Camp Hurontario**

Summers, 2014 - 2016

Over the summers of 2014 to 2016, I have worked as a counselor for Camp Hurontario- a canoe tripping camp located on the Georgian Bay. In this position I worked with many different age groups from six to fourteen years old, and gained a lot of experience in working with people of different maturity levels and interests.

#### **Extracurricular Activities**

#### Queen's Software Developers' Club

September 2016 - Present

Queen's Software Developer's Club is a group of Queen's students who participate in hackathons, coding competitions, and attend seminars. I've joined in order to improve upon my software development abilities, as well as to connect with like-minded people.

#### Queen's Run Club / Cross-Country Running

September 2010 - Present

I've been a member of cross-country running teams throughout primary and secondary school, where we learned how to train and compete as individuals and as a team. In grade ten our team qualified for OFSAA, Ontario's provincial cross-country championship. At Queen's, I've joined the Queen's Run Club, which trains twice a week.

**Debate Club** 

September 2012 - Present

Since I joined my school's debate club in grade nine, I have participated in secondary school debating competitions, including The Fulfords. I also volunteered and debated at the RSGC hosted competition, The Saucer. At Queen's, I have joined the Debate Club, where I hope to continue to improve upon my skills.

#### **Founder, School Programming Club**

January 2015 - May 2016

In grade eleven, I had the idea to start a school programming club. After talking to my computer science teacher, I went about organizing a club in which students in grades six to eight could learn the fundamentals of programming in the language of Python. The club had approximately fifteen students regularly attending to learn about programming.

#### **Conference of Independent Schools Music Festival**

September 2010 - December 2015

CISMF is a regional music festival for independent schools. Since I was in grade seven until grade twelve, I had been selected to perform in various CISMF bands, including the Concert Band and the Wind Ensemble, which perform at Roy Thomson Hall.

#### **Duke of Edinburgh Bronze Award**

**September 2012 - June 2013** 

The Duke of Edinburgh award is an international program, where participants achieve community service, skills, fitness, and adventure goals. I have achieved the bronze award, which means I had to do three months of

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community service, skill development, and physical activity, at one hour per week; and three days of an "adventurous journey".

# Committee member, Take 21 film festival

**October 2012 - April 2013** 

The Take 21 film festival- then called the Toronto Student Film Festival (TSFF)- is an international film festival that is run by Toronto students and teachers. As a member of the TSFF student committee, I gained experience in how to organize and run large events with a large team.