

# SILAS TSUI

University of Waterloo Computer Engineering

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## SKILLS

### Languages

Python, C++, Java, Bash, Swift, VHDL

### Tools

Android Studio, Xcode, Git, Vim, LaTeX, JIRA, SCPI, Arduino, Postman, Android Debug Bridge, Heroku

### Frameworks

pytest, numpy, matplotlib, Appium

### Design

InDesign, Illustrator, Lightroom, Photoshop, HTML, CSS

## AWARDS

### 2016 Loran Scholar

Canada's largest scholarship based on character, service, and leadership

### Dragonboat World Championships

8x Gold Medalist

### UW Eng. Programming Comp.

1x Silver Medalist

### American College Test

Perfect score (99.96th percentile)

## EDUCATION

### University of Waterloo

Honours Computer Engineering 2021  
3.9/4.0 GPA

### Eric Hamber Secondary

Class rank: 2/272; 4.0/4.0 GPA

### MOOC Coursework

Stanford's Machine Learning

## ACTIVITIES

Waterloo Medical First Responder  
Engineering Society First Year Rep  
ECE Academic Rep

## INTERESTS

Board games, Graphic design  
Environmental sustainability,  
Ultimate frisbee, Longboarding

## EXPERIENCE

### Software Test Engineering Co-op, Thalmic Labs

Kitchener, ON — Jan 2017 - Apr 2017

- Created automated test suite for elec. team using **Appium**, **SCPI**, **numpy** and **matplotlib** integrated with **Arduino** and circuit components to measure power on wearable technology across prototypes
- Refactored 3000+ lines of code and developed test-driven automation infrastructure using **Python** and **pytest** to test key features in embedded software products, reducing manual testing efforts by **35%**
- Developed test cases and scripts with **ADB** and **Android OS** for testing cloud endpoints, wearables operating system, and mobile apps, expanding test coverage by **55%**
- Designed test plans to validate **PRDs** and identify critical product defects

## PROJECTS

### Terra, StarterHacks | Swift, Firebase, Google Vision API, Xcode

- Created iOS app that categorizes waste using image recognition and provides directions to nearest proper waste disposal location

### Auto-Responder Bot | Python, JavaScript, Heroku, Facebook API

- Developed Facebook chatbot that uses NLP, sentiment analysis and Markov chains to generate user-specific replies based on previous conversations

### Colour Palette Analysis | Python, numpy, matplotlib

- Designed program that analyzes websites and uses machine learning to create colour palettes (in progress)

## LEADERSHIP

### Organization Lead, Waterloo Campus Compost

Waterloo, ON — Sept 2016 - present

- Directed initiative to implement compost program into **UW residences**
- Oversaw **20+ members** to manage compost operations, design website using **HTML** and **CSS**, and plan events to promote sustainability

### Co-Chair, Vancouver School Board Sustainability Conference

Vancouver, BC — Dec 2014 - Apr 2017

- Organized Vancouver's **largest youth-led sust. conference** with 400+ attendees by securing over \$3000 in grants and collaborating with 37 speakers and NGOs using excellent communication skills

### Co-Editor-in-Chief, Eric Hamber Yearbook

Vancouver, BC — Sept 2013 - June 2016

- Earned **#1 yearbook in Canada** by mentoring 22-student team in copy, **photography**, and **Adobe Suite**, editing 250+ pages with precise attention to detail, and designing 30+ pages on **InDesign** and **Illustrator**

### President, Eric Hamber Student Council

Vancouver, BC — Sept 2011 - June 2016

- Led 35+ member council and represented **1500+ students** to foster school spirit through charitable events, raising **over 24,000 cans** for the canned food drive and hundreds of dollars for prostate cancer