

# SARTH FREY

SOFTWARE ENGINEERING  
UNIVERSITY OF WATERLOO

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## SKILLS

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**Languages:** Python, Java, C++, SQL, MATLAB, JavaScript

**Libraries/Frameworks:** NumPy, Android SDK, Jinja, Flask, Webapp2, AngularJS, React, TensorFlow

**Datastores:** PostgreSQL, SQLite, MySQL

**Other:** Git, Arduino

## PROJECTS

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### Sleephacks

- Created a web service that allows travelling hackathon hackers to stay with nearby locals
- webapp2, Python, Google App Engine, HTML/CSS/JavaScript

### WatWhenWhere

- Designed and implemented back end collision and parsing algorithms for a web service that allows Waterloo students to compare schedules with friends
- Python, PHP

### Random Maze Generator

- Constructed a random maze generator that produces a random solvable maze with given dimensions
- Python, Turtle

### Streamsorther

- Built an android app that gives users info about a student's co-op sequence, given their year of study
- Java, Android Studio

### Sentimizer

- Made a micro web app that does sentiment analysis on text to figure out if it's happy or sad
- Flask, Python, Google App Engine, HTML/CSS/JavaScript

## EXPERIENCE

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### MEDCAN

**Data Science Intern, CRM** · Jul 2015 to Aug 2015 · Toronto, ON

- Created artificial neural networks in Python to analyze past customer data and predict churn
- Increased accuracy of previous model by 32%
- Used SQL to pull data into xlsx files and employed Openpyxl to read from those files
- Wrote excel macros in VBA to automate processes and save company time

### MOZILLA

**Internet Security Researcher** · Sep 2014 to Feb 2015 · Toronto, ON

- Developed a privacy system to spread internet privacy awareness and educate youth in online security
- Researched tech areas such as encryption, IP tracing, and targeted ads to co-design 10 live badges
- Created a plan for youth to earn badges by integrating desirability, correctness, and informativeness

### FRC ROBOTICS TEAM

**Programming Lead** · Sep 2011 to May 2015 · Mississauga, ON

- Organized the architecture of the command system for 4 multi-functional 120 pound robots
- Utilized LabVIEW and C++ Windriver to write code for the robots to run autonomously and manually
- Taught and managed a team of coders to produce the codebase within a timeframe of 3 to 4 weeks

### KIDS LEARNING CODE

**Mentor** · Aug 2014 to Dec 2014 · Toronto, ON

- Led and engaged in educational and developmental activities with up to 10 youth during a day
- Helped teach HTML, CSS, and JavaScript to youth by solving code issues and going through specific examples
- Inspired youth with examples from personal software development including games made with C++

## AWARDS

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**FIRST Robotics** · 1st Place GTR East Robotics Regional May 2013

Won the finals match in competitions of 500+ people and proceeded to make playoffs in the World Championships

**University of Waterloo** · Euclid Math Competition Distinction Apr 2015  
90th Percentile out of thousands of global participants

**University of Waterloo** · Software Engineering Scholarship Jun 2015

Selected from of those admitted to UW Software Engineering to receive \$5500 based on academics and extra-curriculars