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# Education

#### **University of Waterloo**

Joint Honours Degree B.CS + B.Math in Stats Graduation: April 2019

## Skills

#### **Programming Languages**

Python, Java, C, C++, R, Stata, SQL, VBScript

#### **Libraries & Frameworks**

WEKA, scikit-learn, pandas, numpy, scipy, flask

#### **Foreign Languages**

Fluent Mandarin Advanced French Intermediate Japanese **Beginner Spanish** 

#### Communication

**Business** writing Public speaking Investor relations Digital marketing

#### **Tools**

Sketch Adobe InDesign

## Relevant Courses

Algorithms and Data Structure **Applied Linear Models** Introduction to Combinatorics Logic and Computation Mathematical Statistics **Object-Oriented Programming** Simulation of Complex Systems

# Experience

#### Research Assistant, University of Waterloo May - Aug 2017

- Supervised by Prof. Matthias Schonlau, School of Actuarial Science
- Wrote a Stata plugin that implements all functions from the Random Forest class in the WEKA library, as a part of a 5-year NLP research project
- Plugin scheduled to release to all Stata users in late August
- Source code available upon request at https://git.uwaterloo.ca/schonlau/randomforest

#### **Equity Trading Intern, TD Securities**

Apr - Dec 2016

- Analyzed and visualized TD historic trades and order routing trends
- Researched various financial databases to compile market reports
- Regularly conducted research and data analysis used for marketing
- Re-worked latency calculation script used for performance analysis

#### **Associate Business Analyst, Scotiabank**

Sep - Dec 2015

- Performed daily QA and updated JIRA issue log for the team
- Tracked and examined project costs for resource misallocations
- Updated heat maps and configured access rights during UAT phase

# **Projects**

## Waterloop

May 2017 - present

- University of Waterloo's competitive Hyperloop team
- Software systems developer, telemetry lead
- Designed and created mathematical models for navigation system using IMU, optical, and photoelectric distance sensors
- Designed and implemented raw data noise reduction methods using support vector regression with radial basis function kernel
- Co-designed system state diagram (submitted to SpaceX for Phase II Competition)
- Code available at github.com/teamwaterloop/sensors

## **Hackathon Projects**

Sep 2015 - Oct 2016

- 7 hackathons where I designed and implemented ML algorithms
- Project areas range from mobile/web app developemnt to hardware and augmented reality
- Awards and recognitions include: Top 10 at HackMIT, Best Use of Data Visualization at DubHacks, and Capital One prize at Mhacks
- Details at devpost.com/rosiezou and rosiezou.com