


Rosie Zou

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Education

University of Waterloo

Honours Computer Science
Data Science Option
Graduation: April 2019

Technical Skills

Programming

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

Libraries & Frameworks

Keras, Pandas, Numpy,
WEKA, Scipy

Tools

Sketch
Adobe InDesign

Language Skills

Fluent Chinese
Advanced Japanese
Advanced French
Beginner Spanish

Relevant Courses

Computational Inference
Stat. Learning Classification
Stat. Learning Regression
Artificial Intelligence
Algorithms
Operating Systems

Scholarships

Natural Sciences and
Engineering Research
Council Scholarship

Work Experience

Autonomous Vehicles Software Intern, NVIDIA Sept - Dec 2018

Team: Map Perception. Focus: Sensor-based Mapping

- Designed and implemented end-to-end speed bump and road hazard detection feature in C++ and corresponding client-facing API in C. The feature is fully-documented, tested, scaled, and optimized.
- Implemented auxiliary data pipeline in C and C++ from scratch to increase sampling rate for unprocessed sensor data
- Improved rendering quality of wait conditions in in-car testing software

Research Assistant, University of Waterloo May 2017 - Aug 2018

Department: Statistics

- Implemented, documented, and fully tested a Stata interface for all Random Forest class functions in the Java WEKA library
- Project and resulting paper explored alternative approaches to statistical inference in social sciences such as politics and economics
- Provided regular software maintenance based on user requests

Equity Trading Intern, TD Securities Apr - Dec 2016

Team: Automated Execution Group

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

Select Projects

SpaceX Hyperloop Pod Challenge - Waterloo May - Aug 2017

- Worked on software system of prototype pod that competed in SpaceX's Hyperloop Pod Challenge
- Designed and implemented mathematical models for navigation system using IMU, optical, and photoelectric distance sensors
- Built support vector regression models for raw signal data noise reduction
- Implemented software sub-system for telemetry and navigation
- Co-designed state diagram for entire system
- Archive code available on personal site and github

Papers and Publications

Accepted: AAAI 2019 Student Abstract Sept 2018

CSEye: A Proposed Solution for Accurate and Accessible One-to-Many Face Verification

In Review: Stata Journal Sept 2018

The Random Forest Algorithm for Statistical Learning with Applications in stata

Published: Canadian Stata Conference July 2018

A new Stata command for the Random Forest Algorithm