

Education

- 2018 - present **PhD, Biostatistics**, *University of Washington*, Seattle, WA.
- 2013 - 2018 **BMath, Joint Honours in Pure Mathematics & Statistics (Co-op)**, *University of Waterloo*, Waterloo, ON.
With Distinction - Dean's Honours List
- Fall 2017 **Mathematical Sciences (study abroad)**, *Norwegian University of Science and Technology (NTNU)*, Trondheim, Norway.

Research Experience

- May 2016 - present **Research Assistant**, *Health Data Science Lab*, Waterloo, ON.
Supervisors: Dr. Joel Dubin & Dr. Joon Lee, Health Data Science Lab
◦ Sentiment analysis and mortality in intensive care patients — [link to paper](#).
- Apr - Aug 2017 **Research Assistant**, *University of Waterloo*, Waterloo, ON.
Supervisor: Dr. Pengfei Li, Department of Statistics & Actuarial Science
◦ Robust statistical tests for zero-inflated data — [link to R package](#).
- Jan - Apr 2017 **Research Assistant**, *University of Waterloo*, Waterloo, ON, Canada.
Supervisor: Dr. Yu-Ru Liu, Department of Pure Mathematics
◦ Sieve methods in analytic number theory.
- Jan - Apr 2016 **Student Analyst - Strategic Analytics**, *Cancer Care Ontario*, Toronto, ON.
Supervisor: Dr. Zhihui (Amy) Liu, Dalla Lana School of Public Health, University of Toronto
◦ Multi-state models for forecasting chronic kidney disease progression - [link to conference poster](#).

Teaching Experience

- Sept - Dec 2018 **Graduate Teaching Assistant**, *University of Washington*, Seattle, WA.
BIOST 511: Medical Biometry I

Industry Experience

- Apr - Aug 2015 **R&D Developer**, *DST Systems (c/o IFDS)*, Toronto, ON.
◦ Developed a MapReduce program to perform fuzzy string comparison.
◦ Wrote an XML to CSV converter for use with Hadoop's Distributed File System.
◦ Built a distributed application on the Ethereum blockchain network.
◦ Designed and built a Ruby on Rails application for a technology conference.

- Sept - Dec 2014 **Developer**, *PureFacts Financial Solutions*, Toronto, ON.
- Implemented an error handling pattern for fail-safe API calls.
 - Created a tool similar to 'git stash' for subversion.
 - Developed a web application for employee time-tracking.
- Jan - Apr 2014 **Software Developer**, *Leonardo Worldwide Corporation*, Toronto, ON.
- Managed and delegated support tasks to a team of developers.
 - Wrote scripts to optimize retrieval and storage of images and videos.
 - Created a video encoding scheme for multiple file formats and resolutions.

Publications

I. E. R. Waudby-Smith, N. Tran, J. A. Dubin, and J. Lee. Sentiment in nursing notes as an indicator of out-of-hospital mortality in intensive care patients. *PLOS ONE*, 13(6), 2018.

Presentations

- Jun 2016 **Multi-state models for chronic kidney disease prevalence projections in Ontario**, *Statistical Society of Canada Annual Meeting*, St. Catherines, ON. Poster presentation.
- Jun 2016 **Multi-state models for chronic kidney disease prevalence projections in Ontario**, *Statistical Society of Canada Student Conference*, St. Catherines, ON. Oral presentation.
- Apr 2016 **Sequence analysis of patient-care pathways: A study of colorectal cancer in Ontario**, *Cancer Care Ontario Research Day*, Toronto, ON. Poster presentation.

Projects

- Sept 2017 **rbtt**, *University of Waterloo*, Waterloo, ON.
Developed and currently maintain an R package to perform robust inference on non-negative, zero-inflated data. Created with Dr. Pengfei Li at the University of Waterloo.
- Sept 2015 **HackTheNorth**, *University of Waterloo*, Waterloo, ON.
- Visualized the sentiment of tweets referring to Canadian political parties.
 - Retrieved tweets using the python library, tweepy.
- Feb 2015 **DeltaHacks**, *McMaster University*, Hamilton, ON.
- Made Wikipedia accessible via SMS using Twilio and the Wikipedia API.

Computational Skills

Programming languages **R, Python, Java, C++, Scheme, JavaScript**

Technologies **SQL, Linux, git, Hadoop, L^AT_EX**

Awards

- 2018 - 2019 **UW Top Scholar Recruitment Award**, *University of Washington*, Seattle, WA.
- 2017 - 2018 **David Johnston International Experience Award**, *University of Waterloo*, Waterloo, ON.
- 2016 - 2017 **NSERC Undergraduate Student Research Award**, *The Natural Sciences and Engineering Research Council of Canada*.
- 2016 - 2017 **President's Research Award (1)**, *University of Waterloo*, Waterloo, ON.
- 2016 - 2017 **President's Research Award (2)**, *University of Waterloo*, Waterloo, ON.
- 2013 - 2014 **University of Waterloo President's Scholarship of Distinction**, *University of Waterloo*, Waterloo, ON.
- 2012 - 2013 **Top Ontario Scholar**, *Peel District School Board*, Region of Peel, ON.