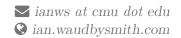# Ian Waudby-Smith

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Education

2019 - present **PhD, Statistics**, *Carnegie Mellon University*, Pittsburgh, PA.

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

Apr - Aug 2019 **Research Student**, *The Hospital for Sick Children (SickKids)*, Toronto, ON.
Supervisor: Dr. Eleanor Pullenayegum

2016 - 2018 **Research Assistant**, *Health Data Science Lab, University of Waterloo*, Waterloo, ON.
Supervisors: Dr. Joel Dubin & Dr. Joon Lee
○ Sentiment analysis and mortality in intensive care patients — link to paper.

Apr - Aug 2017 **Research Assistant**, *Department of Statistics, University of Waterloo*, Waterloo, ON.
Supervisor: Dr. Pengfei Li
○ Robust statistical tests for zero-inflated data — link to R package.

Jan - Apr 2017 **Research Assistant**, *Department of Pure Mathematics, University of Waterloo*, Waterloo, ON, Canada.
Supervisor: Dr. Yu-Ru Liu
○ Sieve methods in analytic number theory.

Jan - Apr 2016 **Student Analyst - Strategic Analytics**, *Cancer Care Ontario*, Toronto, ON.
Supervisor: Dr. Zhihui (Amy) Liu
○ Multi-state models for forecasting chronic kidney disease progression - link to conference poster.

Teaching Experience

Jan - Mar 2019 **Graduate Teaching Assistant**, *University of Washington*, Seattle, WA.
BIOST 508: Biostatistical Reasoning for the Health Sciences

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, LaTeX**

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.