Josh Dunn

Phone: (226) 374-5345
Email: jdunn45@alumni.uwo.ca
Website: `http://joshddunn.com`
Github: `https://github.com/joshddunn`

Education

Master of Science (Thesis Based)   2014 – 2016
Applied Mathematics
The University of Western Ontario

Bachelor of Science   2010 – 2014
Honors Specialization in Applied Mathematics
The University of Western Ontario

Work Experience

Software Developer   May 2017 – Present
MMD Data Systems
Duties include building full-stack implementations of medical-record keeping tools. These tools include browser-based document annotation and patient waitlists. Due to the importance and potential impact these tools can have on the lives of patients, this position has taught me about the importance of testing and writing clean, easily extensible code.

Teaching Assistant   Winter 2015 and 2016 Term
Supervisor: Dr. Lindi Wahl   Western University
Duties included writing the exams, proctoring, and holding tutorials for students taking Calculus and Probability with Biological Applications.

Research Assistant   Summer 2013, 2014 & Fall 2014, 2015
Supervisor: Dr. Geoff Wild   Western University
Duties included building and analyzing mathematical models that studied cooperative breeding and sex allocation. Results of these models were found using high performance computing.

Projects

LatexEval   `https://github.com/joshddunn/latex_eval`
LatexEval is a Ruby gem that I built to evaluate simple mathematical equations written using Latex. For example, this gem would be able to understand and evaluate the equation "\frac{1}{2}x+3" when x=4. This project taught me about the structure of a Ruby gem, and the value of writing proper unit tests to use when refactoring code.

PokeQL / MTGQL   `http://pokeql.com` and `http://mtgql.com`
PokeQL and MTGQL are read-only GraphQL APIs for the Pokemon video games and the card game Magic: The gathering, respectively. These APIs were built using Ruby on Rails and the GraphQL gem. These projects were motivation to learn the GraphQL gem as well as solidify my understanding of

building model relations within Rails.

Coding Languages	I use Ruby and Javascript as my main coding languages. I have experience with test-driven development, Ruby on Rails, GraphQL, FactoryBot, and have some exposure to React. During my master's degree, I used C/C++ to implement parallel computing with the Message Passing Interface (MPI) library.
Academic Awards / Scholarships	NSERC Canada Graduate Scholarship – Doctoral (CGS-D) (2016) (declined)
	Student Presentation Award at AMMCS-CAIMS Special Session (2015)
	NSERC Canada Graduate Scholarship – Masters (CGS-M) (2015)
	Queen Elizabeth II Graduate Scholarship in Science and Technology (QEII-GSST) (2014) and (2015 declined)
	Dillon Gold Medal (2014) — Awarded to the graduating student with the highest average in any Honors Applied Mathematics program.
	Natural Sciences and Engineering Research Council of Canada Undergraduate Student Research Award (2013 and 2014)
	Albert O. Jeffery Scholarship in Applied Mathematics (2013)
	Randal Cole Scholarship in Mathematics (2011)
Research Contributions	"The Influence of Sex Allocation on the Emergence of Cooperative Breeding" presented at the Major Evolutionary Transitions workshop hosted by Oxford University, England, United Kingdom, November 3-4, 2016.
	Reviewer for The Journal of Theoretical Biology (2015)
	Dunn, J. D., Vujicic, T., & Wild, G. (2015). Sex allocation and the emergence of helping in cooperatively breeding species. *Theoretical Population Biology*, 104:1-9.
	"The Emergence of Cooperative Breeding Systems with Resource Allocation" presented at the AMMCS-CAIMS conference hosted by Wilfred Laurier University, Waterloo, Ontario, Canada, June 7-12, 2015.
	"Sex Allocation and the Emergence of Cooperative Breeding" presented at the Canadian Society for Ecology and Evolution (CSEE) conference hosted by The University of Saskatchewan, Saskatoon, Saskatchewan, Canada, May 21-25, 2015.
References	Available upon request.