

Contact Information

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Websites

Github Profile: jdjake

Stack Overflow Profile:
jacob-denson

webdocs.cs.ualberta.ca/~
denson/ (Work in Progress)

Languages

English, Basic German,
Python, Perl, C++, C, C#,
Latex (This resume is
proof!), Matlab

Mathematics

Linear/Abstract Algebra,
Real & Complex Analysis,
Measure Theory,
Functional Analysis,
Topology, Smooth
Manifolds, Mathematical
Logic, Elementary
Differential Equations,
Stochastic Processes &
Brownian Motion, Category
Theory

Interests

Computer Vision and
Computational Geometry,
Dynamical Systems and
Ergodic Theory.

Summary

My adept knowledge of computing science and mathematics have been a solid aid to many groups. With my work on data-consolidation, Microsoft has cut partner pickup times by 80%, saving money for the company and making the partner relationship more pleasant. My work on Cognate identification was crucial to the regeneration process of the near-extinct Totonac languages. My technical competency, enhanced by my strong experience in competitive programming, will add crucial knowledge and experience to your team.

Experience

Summer Internships

- | | | |
|------|---|---------------------|
| 2015 | MICROSOFT | Redmond, Washington |
| | Universal Store Data Cleansing | |
| | Developed algorithms for data linkage. Utilizing various data-cleansing methods together with the Azure and Bing data-analysis packages, cleansed Microsoft's business partner database, removing redundant info, reducing database entries by 20%. My manager for this project was Aman Kansal (Kansal@microsoft.com). I also worked off-hours with a group of interns to send robot adventurers around the world (http://www.projectatlas.ms/), and organized weekly talk sessions! | |
| 2014 | UNIVERSITY OF ALBERTA | Edmonton, Alberta |
| | Natural Language Processing and Cognate Identification | |
| | Worked with the NLP group at the University of Alberta to develop cognate recognition algorithms. Successfully pushed to create a centralized database for storing cognate information, simplifying the learning process. This program was successfully used by linguists at the University of Alberta to understand the Totonac language group. Garrett Nicolai supervised the project (Nicolai@ualberta.ca). | |
| 2013 | UNIVERSITY OF ALBERTA | Edmonton, Alberta |
| | Reinforcement Learning GAMES group | |
| | Implemented efficient abstraction algorithms to create a Sokoban solver for the RLAI group at the University of Alberta, under mentor Harm Van Seijen (Harm.Van.Seijen@gmail.com). | |

Additional Work & Experience

- | | | |
|----------|---|-------------------|
| 2015 | UNIVERSITY OF ALBERTA | Edmonton, Alberta |
| | 'Tangible Introduction To Computing Science' Teaching Assistant | |
| | Advised students in the honours stream of Computing Science who were taking CMPUT 275, a class which introduced students to basic algorithmics, such as asymptotic analysis, divide and conquer, dynamic programming, and such. Led office hours weekly and marked assignments. | |
| 2013-Now | Competitive Programming club | |
| | Competitor | |
| | Strong Competitor in Competitive Programming. Won the Microsoft 2014 Coding for Cash competition, placed 4th in the Alberta Collegiate programming contest in 2014 and 2015. Coached by Zachary Friggstadt (zacharyf@ualberta.ca), ACM world finalist. | |

Education

2013-2017	Bachelors in Computing Science	The University of Alberta
2011-2013	International Baccalaureate High School Diploma	Harry Ainlay High School

Awards

2014	Jason Lang Scholarship	Alberta Scholarships
	Awarded to students Alberta post-secondary students continuing full-time in undergraduate programs with outstanding academic achievements.	
2013	Academic Excellence Scholarship	University of Alberta
	Awarded to students with superior academic achievement entering the first year of an undergraduate degree program at the University of Alberta.	
2013	Faculty of Science Academic Excellence Scholarship	University of Alberta
	Awarded annually on the basis of superior academic achievement to students entering the first year of an undergraduate degree program in the Faculty of Science at the University of Alberta.	
2013	Alexander Rutherford Achievement Scholarship	Alberta Scholarships
	To recognize and reward academic achievement at the senior high school level and to encourage students to pursue post-secondary studies.	

Talks

2015	Microsoft Intern Talks	Microsoft Campus, Redmond
	Presented my talk on category theory, shortened to a 20 minutes talk, and edited to reduce mathematical prerequisites and to emphasize the practical uses for the average programmer. Organized talks over my internship to enable interns to share their knowledge with the group.	
2015	Honours Computing Science Seminar	University of Alberta
	'Category Theory and its relation to Computing Science', an hour-long talk introducing the subject to Honours computing scientists and emphasizing its relation to the Curry Howard isomorphism.	
2014	NLP Research Group	University of Alberta
	'Cognates for Reconstruction of Native American Language groups', a twenty minute talk emphasizing my work over the summer and explaining the organization method and SVM classification method for identifying cognates.	
2013	RLAI Tea Time Talks	University of Alberta
	'Room Abstraction in Sokoban', a 15 minute talk introducing the game of Sokoban, its combinatorial issues, and room abstraction as an aid to attacking the game.	