

Aaron Mishkin

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Education

Current	MSc in Computer Science , University of British Columbia
-	<i>Machine Learning</i>
2018	Advisor: Dr. Mark Schmidt
2018	BSc in Computer Science (Honours) , University of British Columbia
-	Honours Thesis: " <i>Limited Memory Methods for Variational Inference</i> "
2013	Honours Advisor: Dr. David Poole

Publications

Vaswani, Sharan, **Aaron Mishkin**, Issam Laradji, Mark Schmidt, Gauthier Gidel, and Simon Lacoste-Julien. "Painless Stochastic Gradient: Interpolation, Line-Search, and Convergence Rates." *Neural Information Processing Systems (NeurIPS)*, 2019. [[arXiv](#)]

Aaron Mishkin, Frederik Kunstner, Didrik Nielsen, Mark Schmidt, and Mohammad Emtiyaz Khan. "SLANG: Fast Structured Covariance Approximations for Bayesian Deep Learning with Natural Gradient", *Neural Information Processing Systems (NeurIPS)*, 2018. [[arXiv](#)]

Aaron Mishkin. "Web ValueCharts: Analyzing Individual and Group Preferences with Interactive, Web-based Visualizations", Extended Abstract in *Review of Undergraduate Computer Science*, 2017. [[pdf](#)]

Experience

May - Aug 2019	Applied Science Intern , Amazon Development Center Germany GmbH Advisors: Cédric Archambeau and Matthias Seeger Researched meta-learning and transfer-learning approaches to accelerating Bayesian active-learning in the cold-start setting. This work is ongoing.
Jan - Jun 2018	Intern , RIKEN Center for Advanced Intelligence Project Advisor: Dr. Emtiyaz Khan Worked with a diverse team on a natural gradient method for Gaussian variational inference with low-rank covariance matrices. Internship resulted in a publication at NeurIPS 2018.
May - Aug 2016/17	Undergraduate Research Assistant , UBC Advisors: Dr. David Poole and Dr. Giuseppe Carenini Received two undergraduate research awards to investigate information visualizations for preference elicitation and create Web ValueCharts – an application for multi-stakeholder, multi-objective decision analysis.
May - Dec 2015	Intern , MacDonald, Dettwiler and Associates Acted as a full member of a three person team to develop a web client for ordering satellite imagery of the earth.

Teaching

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| Jun 2018 | Teaching Assistant , Data Science Summer School 2018
Worked with another TA to prepare and deliver exercises on variational inference for graduate students attending a two day tutorial on approximate Bayesian inference. |
| Sep - Dec 2017 | Teaching Assistant , CPSC 340: Machine Learning
Duties included marking assignments, invigilating exams, giving tutorials on topics including regularization, convexity, and MLE/MAP estimation, and holding bi-weekly office hours for students. |
| Jan - May 2015 | Teaching Assistant , CPSC 210: Software Construction
Supervised laboratories for a software engineering course on object-oriented programming and design with the Java programming language. |
| Sep - Dec 2014 | Teaching Assistant , CPSC 110: Computation, Programs and Programming
Taught the fundamental concepts of functional programming during weekly labs. |

Conferences

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| Aug 2019 | International Conference on Continuous Optimization (ICCOPT), Berlin, Germany. |
| Dec 2018 | Neural Information Processing Systems (NeurIPS), Montreal, Canada.
Poster: <i>"SLANG: Fast Structured Covariance Approximations for Bayesian Deep Learning with Natural Gradient"</i> |
| Sep 2017 | Undergraduate Research Opportunities Conference, Waterloo, Canada. |
| Jun 2017 | Canadian Undergraduate Computer Science Conference, Toronto, Canada.
Talk: <i>"Web ValueCharts: Exploring Individual and Group Preferences through Interactive, Web-based Visualizations"</i> |
| Mar 2017 | Multi-Disciplinary Undergraduate Research Conference, Vancouver, Canada.
Talk: <i>"Web ValueCharts: Supporting Decision Makers with Interactive, Web-based Visualizations"</i> |

Awards

General

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| 2018 | Travel Award for NeurIPS 2018
Neural Information Processing Systems (NeurIPS) Foundation |
| 2017 | Best Demo
UBC HCI Designing for People Year-end Event
For: Web ValueCharts |

MSc

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| 2018 | Computer Science Merit Scholarship
Department of Computer Science, UBC
Merit-based scholarship for outstanding incoming international and domestic students. |
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2018 | **Canada Graduate Scholarships-Master's Program (CGSM)**
Natural Sciences and Engineering Research Council of Canada
National fellowship awarded to up to 2,500 students annually.

BSc

2018 | **Academic Award of Excellence (Honours)**
Department of Computer Science, UBC
Awarded to the graduating student with the highest standing in the BSc (Honours) in Computer Science.

2018 | **Markus Meister Memorial Prize**
Department of Computer Science, UBC
Awarded to the graduating student with the highest standing in the final year of the BSc in Computer Science.

2017 | **D. F. MacKenzie Scholarship**
UBC

2016, 2017 | **Undergraduate Student Research Award (USRA)**
Natural Sciences and Engineering Research Council of Canada

2016, 2017 | **Computer Science Scholarship**
Department of Computer Science, UBC

2016, 2017 | **Trek Excellence Scholarship for Continuing Students**
UBC
Awarded yearly to students in the top 5% of their undergraduate year, faculty, and school.

2016 | **J Fred Muir Memorial Scholarship**
UBC

2013 | **Chancellor's Scholar**
UBC