

## Grace (Weijia) Yin

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CONTACT INFORMATION	+1 (778) 929-0150 grace.yin@stat.ubc.ca <a href="https://github.com/graceyin06">https://github.com/graceyin06</a>	
RESEARCH INTERESTS	Machine Learning, Markov chain Monte Carlo (MCMC), Causal Inference, Variational Inference, Measurement Models	
EDUCATION	<b>University of British Columbia</b>	
	Master of Science, Statistics	September 2020 - May 2022
	◦ Advisor: Benjamin Bloem-Reddy	
	Bachelor of Science, Honours in Statistics	September 2015 - May 2020
	◦ Advisor: Bruno Zumbo, Nguyen LAM	
RESEARCH EXPERIENCE	<b>Mixing time of High-dimensional variable selection</b> February 2023 - Present Supervisor: <b>Zhixin Zhou, Amini, Arash</b>	
	◦ Calculate the mixing time of Markov chain Monte Carlo (MCMC) methods for Bayesian variable selection	
	<b>Identifying Causal Structure in Equivariant Models</b> June 2021 - May 2022 Supervisor: <b>Benjamin Bloem-Reddy</b>	
	◦ Identify structural causal models by applying constant risk theorem on equivariant predictive models and conducting simulation experiments in Python	
	<b>Bayesian Estimation for Cronbach's Alpha</b> May 2019 - May 2020 Supervisor: <b>Bruno Zumbo and Professor Edward Kroc</b>	
	◦ Conducted mathematical analysis and simulation studies in R to explore the deep understanding of Bayes estimators and empirical estimators for Cronbach's Alpha	
	<b>Caffarelli-Kohn-Nirenberg Inequalities</b> July 2018 - December 2018 Supervisor: <b>Nguyen LAM</b>	
	◦ Used suitable quasiconformal mappings to study the sharp versions and the optimizers of Caffarelli-Kohn-Nirenberg Inequalities	
	<b>Hardy Inequalities</b> May 2018 - June 2018 Research Supervisor: <b>Professor Nguyen LAM</b>	
	◦ Calculated the exact remainder terms of some versions of Hardy-type Inequalities with Bessel Pairs and radial derivatives	
PUBLICATIONS AND MANUSCRIPTS	◦ N. T. Duy, P. Le-Long, and <b>W. Yin</b> : <i>Hardy inequalities and Caffarelli-Kohn-Nirenberg inequalities with radial derivative</i> , Journal of Mathematical Inequalities. Mentored by Dr. Nguyen LAM.	
	◦ N. T. Duy, N. Lam-Hoang, N. A. Triet, and <b>W. Yin</b> : <i>Improved Hardy inequalities with exact remainder terms</i> . Journal of Mathematical Inequalities and Applications.	
MANUSCRIPTS	◦ Equivariant Predictive Models and Structural Causal Model Identification. Master project report, University of British Columbia, 2022.	
TALKS AND PRESENTATIONS	◦ On the relationship between equivariant predictive models and structural causal model identification, UBC statistics graduate seminar. (April 14th 2022)[slides]	

	<ul style="list-style-type: none"> <li>◦ Improved Hardy Inequalities with Exact Remainder Terms, 2018 Canadian Mathematical Society (CMS) Winter Meeting in Vancouver. (December 8th 2018)[poster]</li> <li>◦ Hardy Inequalities and Bessel Pairs, BC Undergraduate Mathematics and Statistics Conference (BC UMSC). (April 25th 2019) [slides]</li> </ul>
SELECTED PROJECTS	<ul style="list-style-type: none"> <li>◦ Gradient Estimator of the Log-Variance Loss Divergence</li> <li>◦ Generalized Linear Models for Predicting Human Suicide Numbers</li> <li>◦ Martingale Convergence Theorem and Stochastic Optimization</li> </ul>
TEACHING EXPERIENCE	<p><b>University of British Columbia</b></p> <p>Graduate Teaching Assistant <span style="float: right;">September 2020 - April 2022</span></p> <ul style="list-style-type: none"> <li>◦ STAT 305 Introduction to Statistical Inference, 2020 Winter &amp; 2021 Spring</li> <li>◦ STAT 406 Methods for Statistical Learning, 2020 Winter</li> <li>◦ STAT 302 Introduction to Probability, 2022 Spring</li> </ul>
EMPLOYMENT	<p><b>B.C. Centre for Excellence in HIV/AIDS , Vancouver, B.C.</b></p> <p>Statistician <span style="float: right;">October 2022 - Present</span></p> <ul style="list-style-type: none"> <li>◦ Answer HIV questions in HIV by wrangling longitudinal and censored HIV data for exploratory data analysis</li> <li>◦ Fit exploratory models and confounding models including generalized linear mixed effect regression models and regression discontinuity design models; selected and adjusted optimal models</li> <li>◦ Contribute to manuscript-writing by translating complex statistical concepts into comprehensible language for epidemiologists and proof reading</li> </ul> <p><b>Kwantlen Polytechnic University Office of Researcher Service, Richmond, B.C.</b></p> <p>Data Analyst <span style="float: right;">September 2022 - October 2022</span></p> <ul style="list-style-type: none"> <li>◦ Fitted generalized linear mixed effect regression models on health science data; presented results to researchers</li> </ul> <p><b>Look4Tutor Institute, Vancouver, B.C.</b></p> <p>University-Level MATH Tutor <span style="float: right;">September 2018 - September 2019</span></p> <ul style="list-style-type: none"> <li>◦ Teach calculus, linear algebra and mathematical proof courses</li> <li>◦ Support students with exam preparation to help them improve their grades</li> </ul>
PROFESSIONAL SERVICE	<p>Journal Review</p> <ul style="list-style-type: none"> <li>◦ Journal of IEEE Transaction on Cybernetics</li> </ul>
HONORS AND AWARDS	<ul style="list-style-type: none"> <li>◦ International Tuition Award (CAD\$3,200), University of British Columbia, 2021</li> <li>◦ International Tuition Award (CAD\$2,100), University of British Columbia, 2022</li> </ul>
VOLUNTEERING EXPERIENCE	<p>UBC-SFU Statistics Joint Seminar, Co-organizer</p> <ul style="list-style-type: none"> <li>◦ UBC-SFU Statistics Joint Seminar Spring 2022</li> <li>◦ UBC-SFU Statistics Joint Seminar Spring 2021</li> </ul>

ACADEMIC TRAINING	<ul style="list-style-type: none"> <li>◦ 14th Women in Machine Learning Workshop (WiML 2019) with NeurIPS , Vancouver, December 9th, 2019.</li> </ul>
RELEVANT SKILLS	Languages:   English, Mandarin Programming: $\text{\LaTeX}$ , Python, R, Julia, SAS, MATLAB, MySQL
LAST UPDATED	August 20, 2023