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— TAI CAI — Brookline MA Canadian Citizen with H-1B

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github.com/padtai

SUMMARY

PhD training Bayesian statistics (multilevel models, causal inference, model averaging, nonparametric theory)

Classical statistics (hypothesis testing, mixed models, regularization, asymptotic theory)

Current interests Artificial neural networks, statistical properties of machine learning methods, Bayesian methods for

machine learning, ProjectEuler+

Frequently used Python, R, SQL, Jupyter Notebook, Amazon S3, Amazon EC2, LATEX

Occasionally used Tensorflow, Keras, Spark, Java, C++, HTML, CSS, Javascript

EXPERIENCE

Senior Data Scientist, BitSight Data Scientist, BitSight

Boston MA 02/2019-Present Boston MA 10/2017-02/2019

- · Oversee all data science requirements for third party risk management projects by collaborating with cross-functional teams
- · Partner with product, sales, and marketing managers to devise data-driven strategies from unorthodox data structures
- · Design studies to evaluate the association and causality of relationships pertaining to efficacy of products, impact of extraneous events, and influence of internal interventions
- · Program Python scripts and modules for data storage, collection, cleaning, analysis, and visualization
- · Lead reading groups covering advanced topics in forecasting methods, prediction intervals, and model evaluation metrics
- · Support data science team members in ad hoc statistical tasks

Data Science Fellow, Insight Data Science

Boston MA 05/2017-09/2017

- · Generated idea for predicting supply/demand at Hubway bike-sharing stations in Boston, despite a lack of labeled data
- · Consolidated and cleaned multiple data sources to tally labeled information for 200 bike stations over 11 million time points
- · Predicted real-time supply/demand for each bike station using various machine learning and statistical models
- · Created website to visualize directions and to predict bike availability for user input origins and destinations
- · Provided mentorship and feedback for subsequent cohorts of fellows

PhD Student, Research Assistant, Harvard University

Cambridge MA 08/2012-09/2017

- · Conducted original statistical research on applied problems in mental disorders, health care policy, and end-of-life care
- · Developed R code for handling datasets with complexities such as sampling bias, misclassified outcomes, correlated outcomes, hierarchical structures, and confounding
- · Taught graduate-level labs with topics ranging from introductory statistics to seminar topics in Bayesian nonparametrics, decision theory, and sequential methods
- · Selected to tutor fellow PhD students for the biostatistics written qualifying exam

Full-time Co-op Work Semesters, University of Waterloo	Waterloo ON	05/2008-12/2011
· Actuarial Analyst, Enterprise Risk Management Munich Re	Toronto ON	09/2011-12/2011
· Actuarial Analyst, Biometric Research Munich Re	Toronto ON	01/2011-04/2011
· Actuarial Analyst, Segregated Fund Valuation, Manulife	Waterloo ON	05/2010-08/2010
· Actuarial Analyst, Group Benefits Pricing, Manulife	Waterloo ON	09/2009-12/2009
· Pension Administrator, Hewitt Associates	Toronto ON	01/2009-04/2009
· Database Analyst, Logitech	Mississauga ON	05/2008-08/2008

EDUCATION

PhD, Biostatistics, Harvard University

Cambridge MA 2017

- · Thesis: Statistical Methods for the Analysis of Observational Data with Multiple Correlated Outcomes
- · Advisors: Tianxi Cai, Francesca Dominici

Bachelor of Mathematics, University of Waterloo

Waterloo ON 2012

· Honours Actuarial Science/Finance Option, Honours Statistics, Co-operative Program

Deep Learning Specialization, deeplearning.ai	
Associate of the Society of Actuaries . Society of Actuaries	

Coursera 2018

Schaumburg IL 2012