YIJUN XIE

(519) · 722 · 7266 ⋄ theyjxie@gmail.com ⋄ www.linkedin.com/in/xie-yijun

AREA OF EXPERTISE

feature engineering, time series analysis, predictive modeling, Bayesian statistics, A/B testing, machine learning

SKILLS

Languages Proficient in R, Python, Julia, SQL; familiar with MATLAB, C/C++.
Software Pytorch, Tensorflow, scikit-learn, Spark, PyMC3, Stan, Turing.jl, Git, JIRA

WORK EXPERIENCE

Data Scientist February 2021 - Present
Royal Bank of Canada *Toronto, Canada*

- Delivered validation reports on AI and Machine Learning models in various business lines, including fraud detection, anti-money laundering, auto-reconciliation, and property valuation.
- Validated models in line with best practice of MLOps and advanced statistical methodologies to identify potential model defects and provide suggestions on performance improvement and monitoring. Communicated effectively with cross-functional teams including model development team, model governance, and business users. Presented validation reports to Global Head of EMRM.
- Lead R&D projects in predictive uncertainty quantification using ensemble learning, deep learning, conformal prediction, and Bayesian statistics. Developed python package that is circulated internally, and planned to be open-sourced. Authored corresponding sections in internal technical documents.

Doctoral Researcher - bit.ly/xyj-phd September 2017 - December 2020
University of Waterloo *Waterloo, Canada*

- Proposed an innovative dimension reduction scheme as well as computational framework for efficient feature extraction from noisy and high frequency data.
- Applied the proposed framework to statistical inference, time series forecasting, and change-point detection problems that outperformed existing PCA-based approaches.
- Delivered research results through academic papers, conference talks, and software packages.

Statistical Consultant July 2016 - February 2020
Osgoode Hall Law School *Toronto, Canada*

- Participated in a legal study regarding labor unions in British Columbia, Canada as the leading statistician of the research team.
- Build ETL pipeline by cleaning and transforming obtained data from the labor board, and conducted statistical analysis to support the research object.
- Provided statistical consultation and explained complicated concepts to researchers without quantitative background in a clear and concise way, co-authored a journal paper that is currently under review.

Research Assistant - bit.ly/xyj-msc September 2015 - April 2017
University of British Columbia *Vancouver, Canada*

- Proposed an original inference method for Autoregressive Stochastic Volatility model aims for quantile prediction and risk management for financial market.
- Designed a novel Bayesian sampling algorithm based on Markov chain Monte Carlo for more flexible model settings, and achieved better performance in estimation for model parameters and backtesting for VaR.

EDUCATION

University of Waterloo September 2017 - December 2020
Ph.D. in Statistics *Waterloo, ON, Canada*