Barinder Thind

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Education

Simon Fraser University Burnaby, BC
MSc. Statistics, GPA: 94% *Sep 2018 || Apr 2020*

Simon Fraser University Burnaby, BC
BSc. Honours Statistics/Economics, UGPA: 89% *Sep 2012 || Apr 2018*

Work Experiences

Quantitative Engineer oQuant Inc. *Vancouver, BC* *May 2019 || Sep 2019*

- Developed models to be optimized using a proprietary AI programming language
- Discovered unique approach for earthquake prediction using support vector machines resulting in a mean squared prediction error improvement of over 12% from previous work
- Began work on an algorithm that can successfully identify salt deposits in seismic images

Teaching Assistant Simon Fraser University *Burnaby, BC* *Jan 2018 || Present*

- Marked and invigilated exams for introductory statistics courses (regression, ANOVA, etc.) while also providing help for students in various programming languages
- Developed communication skills to relay complex information in an understandable manner

Research Assistant Simon Fraser University *Burnaby, BC* *May 2018 || Aug 2018*

- Created a data scraper to help extract information from the Gene Expression Omnibus - a hub for data on genetics
- Worked on a number of data sets to expand my grasp of various modern statistical analysis techniques (PCA, tree methods, FDA)

Methodologist Statistics Canada *Ottawa, ON* *Jan 2017 || Apr 2017*

- Developed a scoring system that would help identify duplicate observations (brought upon by faulty submissions) within the Business Register (BR) through the use of Zipf's law
- Resulted in the identification of over 100,000 duplicate observations

Data Processor Hockey Data Inc. *Vancouver. BC* *Aug 2016 || Jan 2017*

- Primarily gathered hockey data using Excel and an analytics program such as benchmetrics
- Required extreme attention to detail and some knowledge of modern analytics in hockey (Corsi, Fenwick, etc.) was helpful

Programming

Statistical Programming: R || SAS || Excel || SQL || Tableau

Other Programming: Python || MATLAB || LaTeX || C++

Projects

Functional Neural Networks for Scalar Prediction *View Project*
Generalization of neural network network input space - Publication in Progress

Gaussian Processes *View Project*
A detailing from the Bayesian perspective

Neural Ordinary Differential Equations *View Project*
An introduction to a key insight found by extending *Residual Neural Networks*

The Relationship Between Heart Disease and Osteoarthritis *View Project*
Implementation of an ensemble of the LASSO and propensity scores

Least Angle Regression *View Project*
A theoretical explanation of the LARS algorithm

Signal Separation of Energy Sectors *View Project*
An autoregressive approach applied to data signals found through ICA and NMF

Optimizing Travel Routes *View Project*
A combination of the travelling salesman and k-means clustering

Identifying Duplicates within the Business Register *View Project*
Implementation of Zipf's law in the context of record linkage

Awards

Top Statistical Research Award - 3rd Place May 2020 — *Statistical Society of Canada*

Graduate Researchship May 2020 || $6500 — *Department of Statistics - SFU*

Graduate Fellowship Jan 2020 || $6500 — *Department of Statistics - SFU*

Big Data Graduate Scholarship Sep 2019 || $6500 — *Department of Computer Science - SFU*

Case Study Competition - 2nd Place May 2019 — *Statistical Society of Canada*

EFC Scholarship Sept 2018 || $1000 — *Electro Federation Canada*

KEY Big Data USRA May 2018 || $6000 — *Department of Computer Science - SFU*

Police Data Challenge - Honorable Mention Nov 2017 — *American Statistical Association*

NSERC USRA May 2017 || $6000 — *Department of Statistics - SFU*

President/Dean's Honour List Apr 2016 - Present — *Simon Fraser University*

Organizations

Hockey Hack Day in Canada	Treasurer	*Sep 2019 || Present*
Sports Analytics Club	Member	*May 2018 || Present*
Graduate Student Society	Department Representative	*Sep 2018 || Apr 2020*