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

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*
  - Worked primarily to gather hockey data using Excel and an analytics program called
    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 *View Project*
Working paper in which we present a new kind of neural network

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

US Police Data Challenge *View Project*
Predicting proportion functions using functional data analysis

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

Graduate Researchship Jan 2020 ‖ $3250 *Department of Statistics - SFU*

Graduate Fellowship Jan 2020 ‖ $3250 *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 Sep 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 ‖ Present*