Dustin Johnson

Education

2012-2015 **Bachelor of Commerce (BCom) with Honours**, *University of British Columbia*, Vancouver, BC, Dean's Honour's List.
Specialized in Finance and Statistics

Working Papers

2014-Present "A Sub-bagging Approach to Gaussian Process Models for Deterministic Outputs" (Supervised by William Welch)

2015 "A Benchmarking Comparison of MCMC and SMC Samplers" (with Jason Hartford)

2014 "Benchmarking Performance of Julia and Python for MCMC" (with Jason Hartford)

Research Awards

2015 National Science and Engineering Research Council (NSERC) of Canada Undergraduate Student Research Award (USRA) - Department of Statistics

Pending Grants

2015-2018 Teaching and Learning Enhancement Fund (TLEF) for development of the Applied Quantitative Methods (AQM) program that I developed in 2014, $25,000

Experience

Academic

2015-Present **Statistical Research Programmer**, *Department of Statistics, University of British Columbia*, Vancouver, BC.
Support research at UBC through the conduct of statistical analyses, statistical modeling and the design of statistical methodologies involving ensemble approaches to high dimensional function approximation using Gaussian Stochastic processes. Due to high dimensionality and intensive computational algorithms involved, the use of parallel computing using Canada's WestGrid is required. The position also entails advising researchers on study design, analyses and application of statistical methods through my ongoing experimental design procedure for a new standard for Forestry Canada.

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2015-Present **Program Manager and Instructor**, *Applied Quantitative Methods (AQM), University of British Columbia*, Vancouver, BC.

Instruct and facilitate AQM at the University of British Columbia, currently operating through the Sauder School of Business. The Applied Quantitative Methods (AQM) program provides a diverse team of students with applied skills and experience in advanced quantitative modelling, machine learning and data science within a variety of fields. A quantitative team of 15 students is carefully selected each year for ongoing training, then collaboratively work on applied value-added projects with our partnered firms throughout the year with strong involvement of UBC's academic community.

Vocational

2015 **Statistician**, *FPInnovations*, Vancouver, BC.

Given full control over the experimental design and analysis aimed to support the development of a new testing standard for wood quality in the Canadian forestry sector. I managed the entire process from field testing to the analysis of the data. Currently, I am writing the standard based on the experimental results.

2015 **Statistical Consultant**, *Left of the Dot*, Vancouver, BC.

Assisted in the exploration of a large 200TB database and development of large scale clustering, neural network and Bayesian machine learning algorithms for prediction of Google keyword bids and website conversion rates.

Programming skills

R	4 years of experience in data exploration and algorithm development in the R statistical programming language.
Python & Julia	2 years developing data queries and constructing algorithms to benchmark the performance of both languages.
Shell	2 years of linux shell experience and developing script files to automate various tasks and utilising clusters for batch processing.
C/C++	Less than 1 year constructing algorithms to complement R in order to increase computational speed.
Probabilistic Programming	1 year of using JAGS and Stan for Bayesian hierarchical modeling on high dimensional inputs.
Parallel	Utilizing parallel programming and high performance computing on high dimensional data and intensive computation.

Interests

Big Data I have a fond fascination with big data analysis. I have taken it up on myself to install Hadoop on my server and practice using multiple cores to process data queries with MapReduce. The dedicated cloud server is now fully functional and is relied on by the Applied Quantitative Methods (AQM) program at UBC.

Languages I have always been fascinated by different cultures and languages. It is for this reason I lived in Japan for 3 years and learned Japanese, visited a small town in Mexico regularly to improve my Spanish and continuously practice Russian.

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