Henry Fung

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Highlights

Python: pandas, NumPy, scikit-learn, Matplotlib, Seaborn, nltk, Gensim, Keras
Machine Learning: Multiple/Logistic Regression, Decision Trees, Random Forest, Gradient Boosting, Support Vector Machines, Naïve Bayes, KNN
Causal Inference: Randomized Control Trial (RCT), A/B Testing, Regression Discontinuity (RD), Instrumental Variables, Panel Data Analysis, Qualitative Research Design
Deep Learning: Neural Network Model, CNN
Other: SQL, AWS (EC2 and related services), Git, STATA, MATLAB, C/C++, LaTeX
Languages: English (native), Cantonese Chinese (native), Mandarin Chinese (social), French (basic)

Education

Johns Hopkins University, School of Advanced International Studies (SAIS)
MA., International Economics and Quantitative Methods *2018-2020*
- Johns Hopkins University Dean's Scholarship (2018-2020)
- Paul H. Nitze Fellowship (2019-2020)

McGill University
BA., Economics, Minor in Mathematics, summa cum laude *2015-2018*
- Cherry Prize in Economics (2018)

Carleton University
MSc., Mechanical Engineering *2008-2010*
- Thesis: Modelling, Simulation, and Control of a Bipedal Walking Robot

BEng., Aerospace Engineering *2003-2008*
- Project: Modelling Human Abdomen Palpation for a Patient Simulator

Experience

Logapps, LLC **Falls Church, VA**
Data Scientist *5/2019 – 9/2019*

- Developed a Convolution Neural Network model with word embeddings to classify software requirements from multiple industries (using nltk, genism, keras and scikit-learn).
- Processed software requirement texts using Python (nltk and spaCy) and identified semantically similar requirements using pre-trained word embeddings.

Johns Hopkins University **Washington, DC**
School of Advanced International Studies (SAIS)
Research Data Analyst *9/2018 – Present*

- Performed data wrangling, cleaning, exploratory data analysis, and feature selection with elastic net regularization on six large public employee survey datasets (4 million observations across 2000 agencies).
- Specified linear regression models to establish associations between 30 management practices and motivation to verify hypotheses on the effects of supportive management practices on motivation.

Government of Canada **Montreal, Canada**
Data Analytics Specialist *5/2018 – 8/2018*

- Wrangled and cleaned government employee data (3 million observations) and developed a panel regression model to investigate the effects of geographical location, employee experience, and management practices on employee performance.
- Performed a Regression Discontinuity (RD) study to estimate the impact of changes to a training program on employee performance and provided actionable recommendations to the implementation team.
- Derived operational insights from the regression analysis and presented recommendations (using data visualizations) to managers and non-technical team members.

Textron Inc. **Montreal, Canada**
Avionics Systems Engineer *6/2015 – 8/2016*

- Successfully developed simulated models (in C++) for the Airbus A350 Global Aircraft Position System (GAP) and Flight Control Unit (FCU) based on Airbus technical documents.
- Worked collaboratively with test pilots on the design and implementation of an automated validation process for flight simulators that resulted in the reduction of the validation phase of the project by 80 hours.
- Organized and led discussions with aircraft equipment vendors (Honeywell and Thales) on avionics interface issues in the simulator, leading to the resolution of 5 critical simulator issues within the project deadline.

CAE Inc. **Montreal, Canada**
Autopilot Software Specialist/Project Engineer *5/2011 – 5/2015*

- Responsible for the design requirement reviews, software development and testing of simulated autopilot models for Boeing flight simulators (B747 and B787).
- Served as a customer-facing project engineer in five different countries (Norway, Denmark, India, China, and Australia) to support the qualification efforts of simulators and secure customer acceptance.
- Developed realistic work plans and led constructive meetings with engineering teams (5-10 members) on complex simulation issues, leading to the qualification of 5 flight simulators with over 95% of the software issues resolved.