

Phoebe Choi

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ACTUARIAL EXAMS & EDUCATION

Exam Passed: 1/P, 2/FM, 3/IFM, MAS-I, MAS-II, 5, OC1

Exam Sitting Planned: 6 (October 2022)

University of Waterloo

Waterloo, Ontario

Bachelor of Mathematics, Statistics and Financial Analysis/Risk Management, Co-op

December 2020

- **Cumulative GPA:** 3.73 / 4; Term Dean's Honours List (3 terms)
- **Key Coursework:** Time Series Analysis, Classification, Advanced Regression, Fixed Income, Derivatives

WORK EXPERIENCE

Arch Reinsurance

Morristown, NJ

Actuarial Analyst, Reserving

April 2021 – Present

- Performed yearly benchmark study for medical malpractice line, and selected loss development factors and trend factors by analyzing industry data and cedent submissions
- Created and automated exhibits for the quarterly IBNR meeting using Snowflake (SQL) queries and Power BI, and responded to data requests from management and auditors, including liability duration and PYD calculation
- Prepared controls to fulfil the Sarbanes Oxley requirements and refined the tracking system in Excel to improve timeliness and completeness of the controls

Bank of Montreal

Toronto, Ontario

Quantitative Analyst, Capital Markets

January 2020 – April 2020

- Automated hedge accounting documentation creation with VBA and included checks to reduce human error
- Automated the calculation of daily risk exposure on the trader's book using Flask package in Python
- Researched the characteristics of green bonds, and prepared a pitch deck to convince upper management the benefits of establishing a green bond mandate

Bespoke Metrics Inc.

Toronto, Ontario

Data Analyst, Product and Analytics

May 2019 – August 2019

- Utilized K-means clustering to redefine subcontractor grouping and modeled a General Contractor's decision-making process for assigning prequalification limits to subcontractors using decision tree
- Evaluated the impact of missing values and outdated data on predictive model, and provided recommendation on collecting quality data to company founders with a case study on a bankrupted subcontractor
- Enhanced data quality by redesigning database schema using SQL to identify and remove inconsistent data

Manulife

Toronto, Ontario

Segment Analyst, Asset Liability Management (ALM)

September 2018 – December 2018

- Analyzed the sensitivity of the company's liability cash flow, priced floor option and forward starting swaps, and prepared report for the quarterly interest rate risk hedging on new business
- Reconciled the results of two Asian floor option pricing models to assist with the migration of pricing model
- Projected future demand for alternative long duration assets (ALDA) in hedge accounting program, and validated the model by evaluating model inputs and explaining hardcoded numbers

PROJECTS, SKILLS & ACTIVITIES

Projects

- **In-Class Kaggle Competition 2020 – Scored top 10% ([Link](#))**
Predicted the likelihood for a customer to purchase from an online store using LGBM and XGBoost machine learning models in Scikit-learn. Achieved 93% accuracy
- **Hack the 6ix 2019 – Winner of Intact Insurance Challenge ([Link](#))**
Created a web application that estimates car insurance payout using convolutional neural network in Keras. The model takes in car images, determines the level of car damage and estimates claim payout
- **Quantify 2019 ([Link](#))**
Predicted insurance claim fraud with logistic regression and suggested strategies to identify fraud effectively

Skills Excel, VBA, SQL, R, Python (Numpy, Pandas, Sci-kit learn, Keras), Access, Snowflake, Power BI

Activities Data Science Club, Toastmasters International, Rotman Interactive Trading Competition