Phoebe Choi

+1 (647) 795-6002 | phoebe.choi.mk@gmail.com | linkedin.com/in/phoebecmk | github.com/phoebecmk

ACTUARIAL EXAMS & EDUCATION

Exam Passed: 1/P, 2/FM, 3/IFM, MAS-I, MAS-II, 5, 6, OC1, OC2   **Exam Sitting Planned: 7 (May 2024)**

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
- 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
- Created a schedule with clear deadlines for each Sarbanes-Oxley (SOX) deliverable and sub-deliverable, and coordinated with IT and internal audit to transition to a new SOX management system
- Performed yearly benchmark study for medical malpractice line, and selected loss development factors and trend factors by analyzing industry data and cedent submissions

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- Evaluated the impact of missing values and outdated data on predictive model, and provided recommendation on collecting quality data to company founders with a case study on a bankrupted subcontractor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