Justin Kim

j14kim@outlook.com | LinkedIn | Website | (647)-972-6342

ACTUARIAL EXAMS

- Exam MAS-I – *Casualty Actuarial Society (CAS)* — *Sitting in Aug 2025*
- Exam Probabilities – *Society of Actuaries (SOA)* — *May 2024*
- Exam Financial Mathematics – *Society of Actuaries (SOA)* — *Apr 2024*

PROFESSIONAL EXPERIENCE

Co-operators — **Guelph, ON**

Actuarial Analyst — *Jan 2025 - Present*

- Developed Python- and SQL-based Automated Investigation app to automate rate review investigations, building GLM models for Non-Renewal, Quotes, and Premium Realization, providing a foundation for explanatory analysis and reducing time by 60%
- Engineered an LLM-powered Python pipeline that interprets KPIs and portfolio visuals to auto-generate executive commentary, enhancing insight consistency across two monthly reports and reducing manual reporting time by 40%
- Calibrated pricing models in Earnix, incorporating key rating variables to optimize profitability across three provinces, resulting in a 5-7% increase in target loss ratio and improved competitive positioning across both auto and home product lines
- Collaborated with the reserving team to implement stochastic modeling workflows using Python, enabling simulation of reserve variability under unique scenarios and improving the precision of reserve adequacy and loss development factor estimation by 20%
- Built and maintained the Future of Portfolio Monitoring dashboard in Power BI using advanced DAX calculations to identify emerging trends for +3M in-force risks, quotes, premium, CY/AY claims, enabling proactive portfolio steering and executive-level insights
- Supported OSFI-aligned insurance emissions reporting by collaborating with the Finance team and using SQL to extract, transform, and aggregate risk-level data valued at ~$3B for regulatory submissions

Ontario Hose Specialties — **Mississauga, ON**

Data Scientist — *Sep 2024 – Dec 2024*

- Revamped ETL workflows during a company-wide ERP migration by transitioning legacy SAS code to SQL, streamlining production and inventory data integration, and reducing pipeline runtime by 60% through optimized query performance
- Developed Python-based ARIMA models using 5 years of sales and inventory data to produce accurate demand forecasts, significantly enhancing production scheduling and resource planning efficiency
- Created interactive Power BI dashboards visualizing sales, inventory, and production KPIs, enabling real-time operational monitoring

Ernst & Young — **Toronto, ON**

Staff Accountant — *Jan 2022 – May 2023*

- Automated an income distribution model for 20+ key clients using Power Query and VBA, streamlining large-scale financial calculations and reducing reporting time by 60% across multiple teams
- Produced 100+ tailored financial summaries for non-resident clients using Excel, providing compensation breakdowns, multi-jurisdictional calculations, and comprehensive foreign tax credit analyses for filings
- Prepared and reviewed 1,400+ personal tax returns for Canadian and U.S. clients, ensuring compliance with tax regulations and timely submission for residents, cross-border and non-resident clients

Statistics Canada — **Toronto, ON**

Data Analyst — *Apr 2021 – Jul 2021*

- Coordinated end-to-end data collection and processing of 50,000+ household responses in the 2021 Canadian national census
- Developed Tableau dashboards to monitor census response rates and demographic coverage, enabling efficient weekly reporting
- Strategized with various teams to design survey instruments and optimize data collection procedures, improving response rates

PERSONAL PROJECTS

SAP - Sustainability & Multidimensional Poverty Index — *Feb 2025 – Mar 2025*

- Placed 2nd by developing Multidimensional Poverty Index using differential weighting for 250+ countries with 87% accuracy by applying both unsupervised ML techniques (K-means, PCA) and supervised models (Random Forest, Naive Bayes) utilizing Python

EY – Predicting the Impact and Security of Wildfires — *Feb 2024 – Mar 2024*

- Placed Top 4 of 50+ teams by building deep learning models (LSTM, U-Net) to accurately predict the onset and progression of wildfires, integrating high-resolution spatiotemporal datasets to enhance predictive capabilities, achieving an F1-score of 0.72

EDUCATION

University of Waterloo — **Waterloo, ON**

Bachelor of Mathematics – Mathematics/Business Administration & Statistics — *Graduation Date: 2025*

- ***Activities:*** *Vice President of UW Data Science Club, Sponsorship Coordinator of Quantify – Risk & Insurance Competition*

SKILLS & INTERESTS

Technical Skills: Python | R | SQL | VBA | Flask | HTML | JavaScript | Excel | MATLAB | Power BI | Tableau | Earnix | JIRA | Confluence

Interests: Financial Services | Data Science | Machine Learning | Quantitative Analysis | Strategy | Fitness | Electric Veh | Traveling