Justin Kim

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CERTIFICATIONS

• Exam Fundamentals of Actuarial Mathematics – *Society of Actuaries (SOA)*	*Sitting in Oct 2025*
• Exam Probabilities – *Society of Actuaries (SOA)*	*May 2024*
• Exam Financial Mathematics – *Society of Actuaries (SOA)*	*Apr 2024*

PROFESSIONAL EXPERIENCE

Co-operators   **Guelph, Ontario**
Portfolio Analytics & Insights Analyst (formerly Actuarial Analyst)   *Jan 2025 - Present*

- Built and maintained the Future of Portfolio Monitoring dashboard in **Power BI** using advanced **DAX** calculations to track merging trends for in-force business, quotes, premium, CY/AY claims, enabling proactive portfolio steering and executive level insights
- Developed Automated Investigation app with **R Shiny** for rate review monitoring, building **GLM** models for Non-Renewal, Quotes, and Premium Realization, providing a centralized foundation for exploratory analysis and reducing manual analysis time by 60%
- Collaborated with the reserving team to implement **stochastic modeling workflows**, enabling simulation of reserve variability under unique economic scenarios and improving the precision of reserve adequacy analysis and loss development factor estimation by 20%
- 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
- Conducted **causal inference analysis** on 5M+ risks across all LoB using **Python** to inform assumption testing and rate impact studies
- Supported OSFI-aligned insurance emissions reporting by collaborating with the Finance team and using **SQL** to extract, transform, and aggregate risk and coverage-level data for carbon footprint estimation and regulatory submissions

Ontario Hose Specialties   **Mississauga, ON**
Data Scientist   *Sep 2024 – Dec 2024*

- Revamped **ETL workflows** as part of a company-wide ERP migration using SQL, streamlining legacy production and inventory data integration and reducing pipeline runtime by 60% through optimized query performance
- Produced sales **forecasts** by applying ARIMA to five years of historical data, enabling more effective inventory and demand planning
- Developed interactive dashboards in **Power BI** to visualize key sales, inventory, and production metrics to monitor real-time data

Ernst & Young   **Toronto, Ontario**
Staff Accountant II & Staff Accountant I   *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
- Visited **10+ FSO client sites** to conduct process walkthroughs, reconciliations, and preparing working papers to support audit process
- Generated **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 the **end-to-end data collection and processing** of 50,000+ household responses for the 2021 Canadian national census
- Developed **Tableau dashboards** to monitor real-time census response rates and demographic coverage, enabling 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** with differential weighting for 250+ countries with 87% accuracy by applying both unsupervised ML techniques (**K-Means, PCA**) and supervised models (**Random Forest, Naïve Bayes**)

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 spatial-temporal datasets to enhance predictive capabilities, achieving an F1-score of 0.72

EDUCATION

University of Waterloo   **Waterloo, Ontario**
Bachelor of Mathematics – Mathematics/Business Administration & Statistics   *Graduation Date: 2025*

- ***Relevant Courses***: Computational Statistics & Data Analysis, Databases, Deterministic Operations Research Models, Experimental Design, Forecasting, Investment Sci & Corporate Fin, Management Information System, Stochastic Simulation

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