

# Justin Kim

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## WORK EXPERIENCE

### Co-operators

Guelph, ON

Portfolio Analytics & Insights 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, claims CY and AY, enabling proactive portfolio steering and executive level insights
- Developed **Automated Investigation Shiny App** for rate review monitoring, building **GLM** models for Non-Renewal, Quotes, and Premium Realization, improving accuracy and data accessibility while increasing process efficiency
- Deployed an **LLM-powered reporting pipeline** to interpret KPIs and visuals for Non-Renewal Reports, dynamically generating commentaries and summaries, reducing manual reporting time by 40% and enhancing insight consistency for monthly reporting
- Applied **causal analysis** on 5M+ auto, home and commercial risks using Python (Pandas, NumPy, scikit-learn), for various analyses
- Automated month-end data pipelines** for claims and in-force data using SQL and Airflow, improving ops efficiency by 25%
- Supported **external insurance emissions reporting** aligned with OSFI's initiatives, leveraging SQL to extract, clean and summarize risk and coverage level data for carbon footprint estimation and regulatory submission
- Streamlined agile workflows by implementing **JIRA automations** for sprint triggers and status syncing and maintained centralized documentation in Confluence to enhance cross-team visibility and reduce onboarding time

### Ontario Hose Specialties

Mississauga, ON

Data Scientist

Sep 2024 – Dec 2024

- Revamped **ETL workflows** as part of a company-wide ERP migration using PySpark pipelines to process and join large-scale legacy production and inventory datasets, reducing end-to-end runtime by 60% by optimizing partition strategies
- 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, ON

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
- Assisted audit teams by identifying key control risks and supporting evidence gathering for **year-end financial statement audits**

### 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 **2<sup>nd</sup>** 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 Severity 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, ON

Bachelor of Mathematics – Mathematics + Statistics + Business Administration Major

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 | TensorFlow | VBA | Power Query | Flask | HTML | JavaScript | Excel | MATLAB | Power BI | Tableau

**Certifications:** Exam MAS-I - CAS | Exam P – SOA | Exam FM – SOA | Azure AI Fundamentals - MS | Azure Fundamentals - MS

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