Justin Kim

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PROFESSIONAL EXPERIENCE

Co-operators   Guelph, ON
Portfolio Analytics & Insights Analyst   *Jan 2025 - Present*
- Designed and implemented an **A/B test** on renewal notices for auto insurance to evaluate the impact of visible multi-product discounts; randomized renewal offers into control and treatment groups, revealing a 2.1% immediate increase in renewal rates
- Applied **causal inference techniques (DiD, propensity score matching)** in Python on 5M+ auto and home risks, quantifying a 3-7% shift in Loss Development Factors and surfacing high-risk customer segments
- Forecasted lost trends and KPIs using **ARIMA and Exponential Smoothing** on historical claims and policy data, improving early identification of adverse trends for the Growth Monitoring strategy
- Built **4 interactive reporting tools (Flask, JS)** to deliver real-time, actionable portfolio insights for pricing and analytics teams
- **Automated month-end data pipelines** for claims and in-force data using SQL and R, improving data ops efficiency by 25%

Ontario Hose Specialties   Mississauga, ON
Data Scientist   *Sep 2024 – Dec 2024*
- Revamped **ETL workflows** as part of a company-wide ERP migration, streamlining legacy production and inventory data integration, reducing pipeline runtime by 60% through optimized query performance
- Produced **sales forecasts** by applying ARIMA to five years of historical data, optimizing inventory and demand planning
- Conducted **market research and industry analysis** in Python for R&D, supporting new product strategy and benchmarking

Ernst & Young   Toronto, ON
Staff Accountant II   *Jan 2023 – 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** for process walkthroughs, reconciliations, and preparing working papers to support audit process

Staff Accountant I   *Jan 2022 – Apr 2022*
- 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
- Created dynamic **Power BI dashboards** to track tax workflow progress and KPIs, enabling improved resource allocation

Statistics Canada   Toronto, ON
Data Analyst   *Apr 2021 – Jul 2021*
- Coordinated the **data collection and processing** of 50,000+ household responses for the 2021 Canadian national census
- Developed interactive **Tableau dashboards** to monitor real-time census response rates and demographic coverage, enabling targeted outreach strategies and weekly reporting

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
- Applied unsupervised ML techniques (**K-Means, PCA**) and supervised models (**Random Forest, Naïve Bayes**) to extract interpretable clusters and derive data-driven policy recommendations for SAP's sustainability initiatives

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
- Developed a **dual-phase predictive framework** integrating real-time weather conditions, vegetation indices (LAI, NDVI), and demographic data to accurately assess and quantify wildfire risks, achieving an F1-score of 0.72

EDUCATION

University of Waterloo   Waterloo, ON
Bachelor of Mathematics – Mathematics, Statistics, Business Administration Major   *Class of 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 | SAS | VBA | Power Query | Flask | HTML | JavaScript | Git | Excel | MATLAB | Power BI | Tableau

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

Interests: Toronto Raptors | Fitness | Electric Vehicles | Artificial Intelligence | Traveling | Interior Design | Music