

Xiaoyu (Arron) Chen

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Master of Management Analytics graduate with proven analytical skills in data analytics, visualization, and machine learning gained from rich project and professional experiences. A proactive learner with strong leadership and teamwork skills and a high ability to build relationships cross-functionally and collaborate positively in a group setting.

- Advanced SQL and Python Analytics
- Model Validation Expertise
- Proactive Leadership and Teamwork
- Tableau and SAS Certified Specialist
- SSkilled in LLM and NLP
- Exceptional Communication Skills

PROFESSIONAL EXPERIENCE

Royal Bank of Canada, Toronto

Manager – AML Model Validation, Jul 2023 – Present

- Spearheaded comprehensive validations of AML models that utilized advanced machine learning algorithms including **XGBoost**, and **Keras Neural Networks**, with a focus on **name scanning** and **transaction monitoring**.
- Enhanced the **MLOps** framework by conducting continuous **ongoing monitoring** of model performance using key performance metrics and **below-the-line (BTL)** testing, ensuring reliable and effective model operations.
- Developed and automated a **Tableau** dashboard for KPI and KRI reporting, streamlining the monthly reporting process for senior management, and reducing the turnaround time from 5 days to 1 day.
- Effectively communicated the model validation results to various stakeholders, including model developers, internal auditors, and regulators, ensuring clarity in the approach and supporting **compliance** and **audit** requirements.
- Prepared comprehensive validation reports detailing the model's methodology, assumptions and limitations, validation techniques employed, independent test results, and ongoing monitoring plans.

Hudson's Bay, Toronto

Data Scientist Intern, Jan 2023 – Jun 2023

- Led a groundbreaking **NLP** project to extract product attributes from unstructured descriptions, utilizing **Large Language Models (LLMs)** and **text-matching algorithms**, aiming to increase search accuracy and drive sales.
- **Fine-tuned** a **Transformer-based BERT Named Entity Recognition (NER)** model using domain-specific labeled data, utilizing **transfer learning** and conducting **hyperparameter tuning** using **Optuna** to enhance performance.
- Devised a comprehensive product attribute dictionary, significantly enhancing The Bay's search engine robustness, with the potential to boost annual sales by \$1.7 million for every 1% increase in search conversion rates.

PROJECT EXPERIENCE

Detect Money Laundering and Criminal Networks with Scotiabank, Nov 2022 – Feb 2023

- Initiated a high-stakes analysis by integrating **fuzzy search** and **block indexing** to compare 1 million bank accounts against 200 thousand open-source intelligence targets, identifying 600 potential high-risk individuals.
- Demonstrated advanced analytical proficiency in **Python**, employing techniques like SMOTE and ENN for **bias correction**, machine learning model comparison, and rigorous hyperparameter tuning through **cross-validation**.
- Performed intricate **network analysis** to unravel sophisticated money laundering schemes, focusing on high-risk entities characterized by significant **closeness** and **PageRank centrality** metrics.

Data Analyst Mentorship Program with IBM, May 2022 – June 2022

- Engaged in the IBM mentorship program, gaining hands-on experience in business intelligence with **Cognos Analytics** by building AI-powered dashboards and conducting competitive research on Sisense and Tableau.
- Exhibited a profound understanding of the augmented analytics market through **SWOT** analysis and presented various **go-to-market strategies**, including YouTube-integrated promotion, consumer-end BI tools, and bundle sales.

EDUCATION

Rotman School of Management, University of Toronto, Toronto, Ontario

Master of Management Analytics, 2023

- Relevant coursework: Machine Learning Analytics (A+), Modeling Tools for Predictive Analytics (A)
- GPA: 3.82/4.0. Awarded with Dean's list (top 20%) upon graduation

University of Waterloo, Waterloo, Ontario

Bachelor of Mathematics, Double Major in Actuarial Science and Statistics, 2022

- Awarded with Entrance Scholarship and Distinction upon graduation

ADDITIONAL INTERESTS

- Advanced proficiency in **VBA, Python, SQL, SAS, Dataiku, Azure, Databricks, Snowflake, Power-BI, and Tableau**
- Skilled in **Adobe PR** for video editing, with a proven ability to engage audiences, gaining 15K subscribers in a year