

# Andy Yang

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## PROFESSIONAL SUMMARY

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- 4+ years of experience in Data Analytics, with expertise in developing scalable data pipelines, financial modeling solutions, and tools for predictive analytics. Proven ability to generate data-driven insights for business decisions.
- Master's Degree from UBC's Master of Data Science program, deployed ML and AI projects involving statistical analysis, A/B testing, classification algorithms, neural networks, NLP, and cloud computing/
- Strong software development skills in Python, R, and SQL, with proficiency in designing modular and robust data processing systems. Experience using Apache Spark, Hadoop, AWS (EC2, S3, Lambda), and Azure Databricks.

## WORK EXPERIENCE

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### TD Bank Group - Toronto, ON

#### Senior Quantitative Analyst Model Validation

Apr 2023 - Present

- Winner of a 2024 TD League of Excellence award for leading development of an innovative Python-based application that automated the consolidation of model validation reports and KPIs into Tableau dashboards via a SQL data pipeline, expediting audit review processes by 2 weeks per quarter.
- Designed and optimized Python and PySpark scripts to accelerate ML model performance testing (AUROC, MLE, etc.), reducing computation time by over 50% through distributed computing via Hadoop and Azure Databricks.
- Built and validated benchmark ML models for financial products, leveraging regression, decision trees, and neural networks to drive predictive analytics for customer behavior and product success.

#### Quantitative Analyst Model Validation

Sep 2022 – Apr 2023

- Managed the validation of regression, clustering, and AI models for PD, EAD, LGD and Fraud detection, performing model evaluation, back testing, and reporting using SAS, SQL, and Python.
- Applied software engineering best practices, including code reviews, unit testing, and CI/CD pipelines to improve the robustness and maintainability of existing software tools including Python packages and R shiny Dashboards.
- Showcased excellent communication skills by delivering technical presentations on ML Model KPIs to cross-functional stakeholders, translating complex ML concepts into actionable business insights.

### Royal Distributing - Guelph, ON

#### Implementation Specialist

Apr 2021 – Sep 2021

- Displayed excellent critical thinking ability through optimizing SQL queries, restructuring SQL server database schema, and designing custom APIs, enhancing ETL pipelines and expediting query performance by over 200%.
- Demonstrated strong attention to detail through designing custom APIs for vendor data ingestion, improving data quality and reducing manual intervention in data processing.
- Collaborated with vendors to perform root cause analysis on data inconsistencies, enhancing data integrity.

## PROJECTS

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### LiDAR Object Detection and Classification for Cities

May 2022 – Jun 2022

Reliance Foundry Co. Ltd. UBC MDS Capstone

- Trained and deployed a convolutional neural network (CNN) model using PyTorch on AWS to perform 3D object detection and classification within LiDAR point clouds, achieving an average precision score of over 93%.
- Recognized as a Top 3 Capstone Project in the UBC MDS 2023 Cohort.

## EDUCATION

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### Master's of Data Science

Sep 2021 – Jul 2022

University of British Columbia, Vancouver, BC

### Bachelor's of Applied Science in Chemical Engineering

Sep 2016 – Apr 2021

University of Waterloo, Waterloo, ON

## SKILLS

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**Development Tools:** Python (Plotly, Pandas, PyTorch), R (Rshiny), Jupyter Notebooks, PySpark, GitHub, SAS, SQL, Docker

**Statistics:** Hypothesis Testing, Segmentation Analysis, A/B testing, Probability Distributions, Generalized Linear Modelling

**Data Platforms:** SQL Server, PostgreSQL, Hadoop, Tableau, AWS, Spark, Jira, Confluence, MS Azure