

# Leslie Y.

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## Summary of Qualifications

- Extensive experience working with relational databases in **SQL**.
- Professional experience in Python programming with **Pandas**, **SKLearn** and **Matplotlib**.
- Proficient in Excel for data analysis and visualization using advanced functions and pivot tables.
- Working experience in SAS programming and analytics including predictive model training and evaluation.
- Profound knowledge of **Fraud** Analytics in retail and corporate banking, including expertise in handling 1st and 3rd party fraud, and developing **PRM** system rules.
- Comprehensive understanding of BASEL credit risk parameters, focusing strongly on Probability of Default (**PD**) modelling.
- Skilled in advertising analysis with robust knowledge of online channel optimization, **attribution** models, and market audience analysis.
- Experienced in analyzing and optimizing loyalty program profitability using data-driven strategies, including campaign performance analysis and actionable insights generation.

## Instructional Support Assistant – Computer Science

Jan. 2019 – Apr. 2019

University of Waterloo – Waterloo, ON

- **Analyzed** student performance data to create comprehensive final grade summaries using **Excel**, **VBA**, and **Python**, ensuring precise calculations and timely reporting across multiple grading components.
- Designed **data-driven tutorial content** by analyzing past student performance trends, identifying key areas where students required additional support, and tailoring materials to maximize learning outcomes.
- Created **automated reports and visualizations** to provide instructors with insights into tutorial effectiveness and grading trends, driving data-informed adjustments in teaching methods.
- **Translated complex data** and technical concepts into clear, actionable insights for students during weekly tutorials and office hours, helping them improve their understanding of course material and achieve better academic outcomes.

## Instructional Support Assistant – Computer Science

Jan. 2022 – Aug. 2022

University of Waterloo – Waterloo, ON

- Led a team of instructional support assistants, ensuring grading consistency through effective **data management** and regular feedback.
- Developed **automated reports** that tracked tutorial performance and provided faculty with visualized insights into student progress.
- Designed and implemented **data-driven tutorial content**, using performance trends to improve teaching strategies and student outcomes.
- Managed the course's grading workflows by utilizing **Python scripts** to automate routine tasks, significantly improving efficiency in reporting and feedback loops.
- Delivered **data-backed insights** to students and faculty, improving understanding of the course material and enhancing academic results.

## E-commerce Customer Purchase Prediction Project

INFS630 - Data Mining, Winter 2024

- Developed machine learning models to predict customer purchases, focusing on actionable insights for e-commerce optimization.
- Enriched a dataset of 12,330 records with advanced feature engineering, including behavioural patterns and session-based attributes to improve model performance.
- Evaluated various models and selected a bagged Decision Tree to balance interpretability and accuracy.
- Conducted sensitivity analysis on external factors like holidays and promotions, offering strategic recommendations on optimizing customer engagement during high-traffic periods.
- Identified a critical predictor, leading to insights on optimizing key content areas for higher conversion rates.
- Proposed business-focused recommendations to improve customer retention and revenue potential.

## IPRE Credit Risk Modeling

SavvyPro Professional Training, Summer 2024

- Created a Probability of Default (PD) model using SAS for income-generating real estate (IPRE) loans, incorporating data analysis and the 4M framework (Management, Money, Market, Material).
- Conducted comprehensive data quality checks and management, addressing outliers and missing values. Employed Weight of Evidence (WOE) to evaluate the predictive power of continuous, ordinal, and categorical variables.

- Applied stratified random sampling for effective model training, using a combination of technical analysis and industry knowledge to pinpoint key risk factors.
- Assessed model performance through thorough in-sample and out-of-sample testing, outlining its limitations, optimal use cases, and trigger points.

#### **Fraud Analysis Projects**

*SavvyPro Professional Training, Summer 2024*

- Developed expertise in commercial and retail payment systems, specializing in detecting and mitigating both first-party and third-party fraud through tailored methodologies.
- Analyzed over 200K retail transactions, leveraging SQL for data cleaning and advanced feature creation to uncover fraud patterns and maintain data integrity.
- Applied univariate analysis to identify key features, optimizing fraud detection accuracy.
- Created and implemented fraud rules for schemes like Taxi Scams and Worthless Deposits, with performance evaluated by key metrics such as detection rates and false positive reduction.

#### **Marketing Campaign Insights and Profitability Analysis**

*SavvyPro Professional Training, Summer 2024*

- Worked on a consulting project to enhance the profitability of Tim Hortons' Roll Up The Rim (RUTR) campaign. Gained insights into the campaign's structure, duration, target audience, and objectives through in-depth analysis.
- Analyzed over 900K historical campaign data using Excel, including pivot tables and advanced functions to identify trends and key profit drivers such as store location, prize distribution, and customer behaviour.
- Applied data-driven strategies to pinpoint the factors affecting campaign success, including store location, prize distribution, winning rates and customer add-on purchases.
- Delivered recommendations to improve the campaign's design, based on insights into profitability and performance metrics.

#### **Online Direct Marketing Advertisement Analysis**

*SavvyPro Professional Training, Summer 2024*

- Gained expertise in online advertising, with a focus on diverse channels, campaign goals, and key metrics like conversion rate, CTR, and ROAS.
- Applied Python (Pandas) for advanced data analysis, handling missing values, duplicates, and complex data manipulation to create personalized media strategies.
- Conducted in-depth customer persona analysis, providing actionable insights to refine targeting and optimize campaign performance.
- Developed Markov Chain attribution models using ChannelAttribution, enhancing media performance evaluation and optimizing budget allocation through removal effect analysis.

## **EDUCATION**

### **Master of Information Studies**

McGill University

Sep. 2023 - Present

Montreal, QC

### **Bachelor of Statistics., Hons., Co-operative Program**

University of Waterloo

Sep. 2017 - Dec. 2022

Waterloo, ON