

# Yunzhao (Daniel) Li

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## EDUCATION

### Western University

Master of Data Analytics

University of Toronto | Annual GPA: 3.7/4.0

Honours Bachelor of Science in Statistics Specialist and Minor in Mathematics

**Certifications:** CFA Level I Candidate, FRM Candidate; **Language:** Proficient in English and Mandarin

**Technical Skills:** Proficient in Python, R, SQL, SAS, Java, LaTeX, and MS Office365 (Word, Excel and PowerPoint), Bloomberg

London, ON

Sept 2025 – Now

Mississauga, ON

Sept 2020 – June 2025

## WORK EXPERIENCE

### Top Knowledge Co.

Toronto, ON

Business Analyst (Internship)

June 2025 – Aug 2025

- Conducted in-depth data analysis using **VBA** to categorize customer behaviors and needs, enabling the design and implementation of targeted marketing strategies that successfully increased customer retention rates by 17%.
- Designed and maintained **dashboards** that streamlined customer reports and enhanced report accuracy, thereby accelerating compliance adaptation and helping management decision-making, resulting in a 15% boost in operational effectiveness.
- Spearheaded the development of a robust **data integration framework**, consolidating multiple data sources into a unified SQL database to enhance data accessibility and reliability across business units.

### AstraZeneca

Shanghai, CN

Assistant, Data Department (Internship)

Nov 2022 – Nov 2023

- Analyzed market dynamics and competitor products using **Python/SQL/Excel**; built evidence-based visuals (**Tableau/Power BI**) for seminar briefings that cut prep time and improved forecast accuracy by 12%.
- Processed and reconciled large datasets in Excel (**pivot tables, LOOKUPS, VBA**); delivered weekly performance reports to leadership and partnered cross-functionally to produce concise explainer videos, beating target KPIs.
- Maintained data pipelines and handled ETL exceptions (**data-quality checks, SQL validations**); reduced data discrepancies by 28% and supported analytical models that cut customer-issue resolution time by 18%, and produced daily P&L and risk reports; launched dashboards that surfaced anomalies in real time.
- Built and back-tested factor/alpha models in Python (**pandas, NumPy**); improved portfolio Sharpe by +0.25 and trimmed max drawdown by 10% under out-of-sample tests, while automated ingestion/cleaning of market data (e.g., **Bloomberg/Quandl**); reduced research runtime by 40% and expanded universe coverage from 300 to 470 tickers.

## PROJECT & LEADERSHIP

### LexiGO – Language Learning Desktop App

July 2025 – Sept 2025

- Built a Java Swing application with Clean Architecture, enabling adaptive vocabulary learning via flashcards, spaced repetition, and gamified features (streaks, badges, leaderboards).
- Developed core modules and analytics dashboards with JSON-based persistence, ensuring robust, maintainable code through unit and integration testing, while collaborating in an Agile team using Git/GitHub.

### PCA on Credit Default Swap Term Structures

Mar 2025 – Apr 2025

- Modeled CDS curve risk factors via PCA across 10 maturities for 600+ firms; first three components (level, slope, curvature) explained ~96% of cross-maturity variance; translated factor shocks into risk metrics by re-pricing curves under  $\pm 2\sigma$  stresses; quantified impacts on 99% VaR/Expected Shortfall and highlighted top-decile names by stress beta across sectors/ratings.
- Built R tooling for loadings/score diagnostics, biplots, and clustering to flag curve anomalies/illiquidity; stability testing on rolling windows yielded out-of-sample  $R^2 \approx 0.88$ , with documentation aligned to model-risk governance.

### Sparse Discriminant Analysis with LASSO for High-Dimensional Classification

Mar 2025 – Apr 2025

- Replicated and evaluated a published Sparse Discriminant Analysis framework that applies LASSO-based feature selection, and machine learning models, demonstrating its ability to extract the most informative signals from large, complex datasets.
- Designed and executed simulation studies in R to benchmark SDA against standard classification, such as bayes classifier, showing stronger predictive accuracy and robustness under high-dimensional and sparse data conditions.

### Logistic Map and Chaotic Dynamics

Nov 2024 – Dec 2024

- Explored the dynamics of nonlinear systems by analyzing the transition from stability to chaos in the logistic map, applying bifurcation analysis, period-doubling, and Feigenbaum constants to quantify regime shifts.
- Built Python simulations to generate bifurcation diagrams and cobweb plots, visualizing the onset of chaos and drawing parallels to risk modeling, tail events, and systemic instability in financial systems.

### CSSA of University of Toronto

Mississauga, ON

Academic and Events Coordinator, Academic & Events Departments

Sept 2022 – June 2025

- Actively contributed to the CSSA Academic Department at UTM, where I introduced the statistics program and shared experiences at orientation events; provided ongoing course selection guidance and answered inquiries for new students.
- Collaborated with the Events Department to plan and execute the Dragon Boat Festival activities, including coordinating with vendors for dragon boat rentals and ensuring smooth event operations.