

# Duo (Ellen) Zhang

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## SKILLS

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- Technical skills: Proficient in SQL, Tableau, R, Python, VBA, Microsoft Office  
Sound knowledge of MATLAB
- Certificate: Tableau Desktop Specialist, Canadian Securities Course

## PROFESSIONAL EXPERIENCE

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### *Data Analyst Intern | EDPYPF Services Inc.*

**Apr 2024 - Aug 2024**

- Developed and adjusted annual category business plans monthly to optimize production capacity, meet product demand, and reduce labor and inventory costs.
- Created Excel reports for business performance valuation, focusing on budgeting, profitability, and resource allocation using advanced formulas and pivot tables.
- Converted complex data sets into visual formats, enhancing understanding and supporting decision-making with bar charts, pie charts, and color-coded tables.
- Analyzed the effectiveness of marketing campaigns and consolidated diverse data from sales, customer interactions, and product details to gain insights into customer behavior and sales performance.
- Prepared and presented detailed weekly reports to the manager, summarizing key findings, progress, and actionable insights from ongoing projects.

### *Accident & Health Insurance Department, Data Analyst Intern | Allianz JD*

**Jul 2021 - Oct 2021**

- Leveraged SQL to extract and integrate over 100 insurance products, combining sales, profit, quotes, and terms. Conducted detailed analysis of the Accident and Health Department's offerings, focusing on key performance metrics and payout ratios to assess profitability.
- Collaborated with external vendors for market analytics, examining over 400 competitor insurance products regarding coverage and pricing. Successfully identified 5 key opportunities to enhance competitive edge in pricing and policy terms.
- Developed Tableau dashboards to analyze sales and revenue, identifying underperforming insurance products, leading to a 15% improvement in pricing efficiency.
- Prepared daily and monthly performance reports for insurance products using Excel and VBA, tracking pricing, revenue, profits, and sales trends. This led to a 10% improvement in the effectiveness of product performance monitoring.
- Monitored market changes and regulations affecting internal insurance pricing and ensuring compliance with the China Banking Regulatory Commission by reviewing and adjusting over 100 insurance policies daily.

### *Equities Department Intern | China International Capital Corporation Limited (Remote)*

**Jul 2020 - Aug 2020**

- Prepared 10+ presentation materials which consist of investment opportunities within the global financial markets, contributing to the strategic investment plan, and offered investment advice to support institutional clients.
- Compiled and synthesized research from senior analysts, extracting pivotal insights and transforming them into actionable investment recommendations. This significantly enhanced the value of client morning calls, leading to a 20% increase in positive feedback.
- Proficient in equity valuation across domestic and international markets, complemented by detailed analyses of 5 major domestic energy firms, utilizing financial ratios (P/E, P/B, P/S, debt-to-equity, dividend yield) to assess valuation and fiscal stability.

## PROJECT EXPERIENCE

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### *Modeling and Forecasting US Financial Market Volatility: An Evaluation of ARMA-GARCH Methodologies*

**Sept 2023 - Dec 2023**

- Employed methodologies including GARCH, GJR-GARCH, and EGARCH in R to analyze financial data and conduct volatility forecasting for the S&P 500
- Applied statistical validation and back-testing to evaluate all three ARMA-GARCH models for baseline volatility accuracy, optimizing the model with the highest prediction fidelity.
- Compiled and articulated research findings into an insightful paper, shedding light on market volatility's far-reaching implications for both investors and policymakers, aimed at informing strategic decision-making.

### *Telco Customer Churn Prediction Project*

**Sept 2023 - Dec 2023**

- Collaborated with teammates on the Telco Customer Churn Prediction project, focusing on comprehensive data cleaning processes to eliminate duplicates, outliers, and fill in missing data, setting a robust foundation for accurate analysis.
- Conducted exploratory data analysis (EDA) to identify key factors driving customer churn, focusing on customer demographics to inform targeted retention strategies and guide future feature engineering efforts.
- Utilized Python to develop a machine learning model with Random Forest to analyze and predict telco customer churn rates, significantly improving client retention strategies.
- Executed extensive data analysis using Big Data frameworks, converting raw data into actionable insights presented via Tableau dashboards, aiding stakeholder decision-making.

## EDUCATION

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- **McMaster University, DeGroote School of Business** **2021 - 2023**
- *Master of Finance*
- Entrance Scholarship - Awards and Scholarship
- **McMaster University** **2017 - 2021**
- *Bachelor of Science, Major in Actuarial and Financial Mathematics, Minor in Economics*