Yuzhi Tao

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Education

University of California San Diego (UCSD) — San Diego, CA
Master of Science in Business Analytics — 12/2025

Rutgers University — New Brunswick, NJ
B.S. in Business Analytics and Information Technology; Finance — 05/2024

Technical Skills

Programming Languages: Python (Jupyter, VS), SQL (PostgreSQL, MySQL), R
Methodologies: Machine Learning, Natural Language Processing; Causal Inference, A/B Testing, Experimentation, Hypothesis testing, Probability, Simulations, Confidence Intervals, Correlation, Regression, Time Series, Optimization, LLM, Funnel analysis, Bayesian Inference, Stochastic Process
Software: Excel(VLOOKUP, MACRO, VBA, PIVOT), Word, PowerPoint, PowerBI, Tableau, Google Analytics; git, SAP, Salesforce, ERM, CRM
Data Engineering: ETL, Snowflake, Hadoop, Hive, Spark, Data Extraction, Manipulation and Database Management, AWS, Data Pipeline

Work Experience

Changzhou Metro Group Co., Ltd. — *Data Analyst Intern* — **08/2023 - 10/2023**
- Analyzed historical metro operation data to identify failure patterns that are predictive of operational risk, optimizing resource allocation of maintenance resources and improving monitoring system efficiency.
- Developed a passenger time-saving benefits model to quantify economic gains from metro use across metro and ground transportation, enabling cost efficient route expansion and scheduling projects.
- Conducted sensitivity analysis in Excel on projected passenger volumes for three new metro lines under varying public transportation share rates, providing insights to optimize capacity planning and adjust service frequency.
- Created bi-directional passenger flow visualization charts which identified high-demand stations during peak hours, leading to an optimized schedule that reduced system overload by 12%.
- Conducted GIS analysis to integrate satellite imagery with metro station geodata, identifying underutilized land and low-density areas for commercial expansion to capitalize on non-ticket revenue opportunities.

ICBC Changzhou Branch — *Financial Analyst Intern* — **05/2023 - 08/2023**
- Automated financial data processing by transforming over 3,000 raw financial datasets in CTP Java Studio into summary tables, reducing manual data input, enhancing accuracy, and streamlining reporting processes.
- Utilized SQL and MBI visualization tools to monitor large-scale financial transactions, identifying 50+ instances of suspicious activities and supporting compliance with anti-money laundering regulations.
- Developed SQL queries for data filtering, aggregation, and report generation to enable financial reporting and analysis of corporate accounts

Donghai Securities — *Risk Management Intern* — **06/2022 - 08/2022**
- Analyzed financial data for securities growth potential through financial modeling of operating income and net profit in Excel, identifying securities with over 30% growth for year-over-year growth and PE ratio calculations.
- Created interactive Excel dashboards to visualize financial trends and valuation metrics, enabling identification of high-growth securities for investment decision-making and portfolio optimization.
- Utilized financial analysis software such as Wind and Excel to extract data and generate ROE forecasts for newly listed stocks to support long-term risk assessment.

Project Experience

Direct Mailing Optimization For QuickBooks — **01/2025 - 02/2025**
- Designed and implemented logistic regression and neural network models to optimize direct mail advertisement targeting strategies, increasing conversion rates by 12% while reducing marketing costs.
- Utilized cost-benefit analysis to optimize customer response probabilities, incorporating response probability decay factors and profitability constraints to increase net revenue by 10%.
- Implemented an ETL pipeline in Python and SQL to process customer records, further utilizing data integrity checks to reduce data processing time for campaign execution.

Mobile Games A/B Testing with Cookie Cats for Player Retention — **11/2024 - 01/2025**
- Conducted data pre-processing, exploratory data analysis and visualization to extract key insights for player behavior.
- Calculated and compared 1-day retention and 7-day retention for control and treatment groups for significant differences via z-test.
- Validated the certainty of retention rate differences via bootstrapping to quantify model robustness.

E-commerce Database Analyst and Optimization Using MySQL — **08/2024 - 09/2024**
- Analyzed website traffic and conversion rates using MySQL to optimize bids and improve advertising budget allocation for traffic performance.
- Conducted customer segmentation and sales performance analysis across channels, products, and user segments to identify key sales patterns and high-value customers for strategic decision-making.
- Prepared data-driven reports and visualizations in PowerBI for executive decision-making, providing insights into traffic sources, sales performance, and customer behavior trends.

User Behavior Analysis for Learning Platform — **05/2024 - 07/2024**
- Analyzed customer behavior across 250,000+ users for an online learning platform, using MySQL to assess user engagement, conversion rates, and the impact of marketing campaigns.
- Designed and built a Tableau dashboard to visualize key metrics, including cohort analysis and retention curves, to create data-driven strategies for marketing campaigns and new feature launches that increased onboarding rates.
- Proposed recommendations to improve the user onboarding experience and personalized content delivery through data analysis of student user behavior, contributing to a 7% increase in engagement and conversion rates.