

Oliver Zhou

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Education

Northwestern University

Master of Science in Machine Learning and Data Science

Evanston, IL

Dec 2024

- **Relevant Coursework:** Predictive Analytics Series, Database and Information Retrieval, Deep Learning, Data Mining, Analytics for Big Data, Data Warehousing and Workflow Management, Cloud Engineering for Data Science, Text Analytics, Predictive Models for Credit Risk Management

University of Michigan

Bachelor of Science in Statistics, Minor in Mathematics and Business, GPA: 3.84/4.0

Ann Arbor, MI

May 2023

- **Scholarship:** Veeam Software Endowed Scholarship in Data Analytics, 2021-2023 Academic Years.
- **Awards/Honors:** James B. Angell Scholar (Winter 2022-Spring 2023); Dean's List: FA19, SP20, FA20, SP21, FA21, WN22, FA22, WN23

Working Experience

Little City Foundation

Data Science Consultant

Chicago, IL

Sep 2023 – Present

- Performed **feature engineering** to create responsive prospecting models (**classification** and **regression**) that predict future donor category/level based on 25 years of data
- Identified outliers/influential points and modified models to find the optimal one by using 3 different **variable selection methods** (Stepwise, Backward Elimination, AIC)
- Designed machine learning models in **Python** to investigate the previous donor behaviors and maintained 90%+ high-level donors; prepared and presented the executive summary

Nationwide Mutual Insurance Company

Business Insights Analyst

Columbus, OH

May 2023 – Aug 2023

- Analyzed 1,000,000+ rows of cognizant quality data and explored potential influences of processing time and number of touches on error rate; proved 15 assumptions using **hypothesis tests** in **R**
- Incorporated Nationwide and Allstate datasets and provided predictions of the combined loss ratio for 50 states of the National Retail Programs by joining tables using **SQL** queries
- Visualized the percentage difference between technical premium and premium in force in 41 states in the U.S. using **Tableau** by extracting relevant data (15+ columns and 100,000+ rows) from **Snowflake** by writing **SQL** queries
- Designed and produced Small Commercial Self Tracking dashboards that provide insight into daily operations to both the onshore and offshore teams to oversee the data transition process over the past 3 years

University of Michigan – Ross School of Business

FIN 302-Making Financial Decisions Course Instructor

Ann Arbor, MI

Jan 2023 – Apr 2023

- Selected as the recitation instructor from 130+ students to demonstrate complex finance concepts for a class of 150+

Michigan Institute for Data Science

Data Science Assistant

Ann Arbor, MI

Apr 2022 – Apr 2023

- Explored the potential relationship between the local crime rate and team performance in 10 areas using **Excel** and **R**
- Conducted **data mining** on the dataset (100,000+ rows) to interpret connections between the modern esports industry and the traditional sports industry and quantified the difference

Research Project

Predictive Model Analysis for Profit Optimization Strategy in Telemarketing Centers of Banks (R)

- Developed 12 models using ANN, KNN, **linear regression**, **SVM**, **Decision Tree**, and **random forest** to predict the telemarketing call results, assessed the performance of basic models, and optimized each model by different approaches (variable selection, kernel selection, etc.)
- Linked to the business problem and implemented loss matrix/function to the previous models and produced a final deliverable containing qualitative contents analysis along with the proof from modeling in a generally understandable tone to indicate the best **stacked model**

Future Stock Price Prediction of the Goldman Sachs Group Using Deep Learning Algorithms (Python)

- Designed 8 models in different structures to predict the future stock value of Goldman Sachs including **LSTM**, **SimpleRNN**, and **Dense Layer**
- Interpreted the accuracy, modified the number of units, and chose the most appropriate loss function
- Achieved an accuracy >99.97% for the best model based on a dataset containing daily market information from May 1999 to March 2022 (7 columns and 5,000+ rows)

Technical Skills / Extracurricular

Programming: Python (ex. scikit-learn, NumPy, pandas, TensorFlow, PyTorch, Matplotlib, BeautifulSoup, selenium, etc.), R, SQL, SAS, Julia, Scala, Rust

Relevant Platforms: Visual Studio Code, Jupyter Notebook, Snowflake, DataGrip, SQLite

Software: GitHub, Tableau, Power BI, Microsoft Office

Language: Chinese (Native), English (Professional Proficiency)

Campus Involvement and Leadership: University of Michigan Chinese Soccer Club: Captain; ImmersiveLIVE Drama Club: Starring/Associate Director; Applied Linear Algebra (MATH 214): TA/Grader