

# XINYUE ZHANG

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## SUMMARY

Enthusiastic and solution-driven quantitative developer/data scientist with over 4 years of experience in quantitative analytics, predictive modeling, and machine learning. Demonstrated expertise in Python, SQL, Tableau and A/B testing, with a strong foundation in applied statistical methods. In-depth knowledge in test-driven development (TDD) and Agile methodologies with background as a key contributor to the entire software development life cycle (SDLC). Adept at leading initiatives, collaborating cross-functionally and communicating complex data insights to technical and non-technical stakeholders. Seeking opportunities to leverage my analytical expertise in dynamic, growth-focused organizations.

## SKILLS

**Programming Languages:** Python (numpy, pandas, scikit-learn, Jupyter Notebook), SQL, MATLAB, R

**Machine Learning:** regression, classification, random forest, XGBoost, deep learning (TensorFlow), NLP, time series forecasting

**Data Visualization:** Python (matplotlib, seaborn), Tableau, Excel, Google Analytics

**Tools & Methods:** Databricks, BigQuery, Snowflake, A/B testing, Agile/Scrum, Git/Github, Bloomberg

## PROFESSIONAL EXPERIENCE

### Bank of America

Charlotte, NC

*Senior Quantitative Developer (AVP)*

Nov. 2021 – Present

- Designed, built and integrated predictive regression models in Python, enhancing liquidity risk management and improving market prediction accuracy by 10%; facilitated model deployment to Prod in conjunction with engineering teams
- Developed and deployed streamlined Python scripts for time series data backtesting, leading to 50% time saving in gap analysis
- Conducted comprehensive scenario analysis and CCAR stress testing, offering actionable insights into potential risk trajectories
- Partnered with traders and IT for optimizing batch/real-time front-office data integration, fostering enhanced decision-making
- Mentored junior team members, accelerating project completion by 30%
- Authored a detailed 30-page model documentation and worked alongside the model validation team for feedback and refinement

### State Street Corporation

Burlington, MA

*Business Analyst in Charles River Development*

May 2019 – Oct. 2021

- Collaborated closely with product managers and developers from product conception to launch in an Agile/Scrum environment
- Developed SQL queries for robust data extraction and conducted exploratory testing to ensure product functionality and resilience
- Researched and resolved 100+ client enquiries, leading to new business opportunities and a 25% boost in client satisfaction scores

### University of Michigan Transportation Research Institute

Ann Arbor, MI

*Research Assistant*

Apr. 2019 – May 2019

- Independently collected, cleaned and analyzed transportation data of 2014 to 2016 in Python, comprising 4,000+ accident records
- Utilized and implemented machine learning models including logistic regression and random forest for predictive analytics on accident severity, realizing an accuracy at 0.80; presented findings and key insights (60 pages+) to clients directly

## PROJECT EXPERIENCE

### Movie Recommendation System

- Spearheaded the creation of content-based and collaborative filtering recommendation algorithms using 10,000 movies to generate user-centric recommendations, highlighting the practical application of innovative machine learning. [Github](#)

### Predictive Analysis on Bulldozer Prices

- Leveraged random forest model in Python for time series analysis on 400,000+ records to forecast bulldozer prices, identifying key factors influencing pricing trends. [Github](#)

### Loan Status Prediction System

- Developed a predictive model on loan application status using support vector machine, achieving an 83% accuracy rate. [Github](#)

### Mobile Games A/B Testing with Cookie Cats

- Used Bootstrapping to create 500 samples from dataset and analyzed A/B test results to guide game app redesigns. [Github](#)

## EDUCATION

### University of Michigan

Ann Arbor, MI

*M.S. in Quantitative Finance and Risk Management*

GPA:3.8/4.0

Sept. 2017 – Dec. 2018

### Central University of Finance and Economics

Beijing, China

*B.S. in Economics (Mathematical Economics and Finance)*

GPA:3.9/4.0

Sept. 2013 – June 2017