XINYUE ZHANG

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SUMMARY

Self-motivated and solution-driven quantitative developer with 4 years of experience in **machine learning** (multivariate OLS linear regression, logistic regression, random forest model, principle component analysis), **quantitative analytics** and **data science**; proven ability to develop and implement reliable, well-structured code using **Python**; skilled in utilizing **Python** and **SQL** to interpret and analyze large datasets to drive meaningful business decisions

SKILLS

- Python (numpy, pandas, matplotlib, seaborn, scikit-learn)
- Data Visualization (Tableau, Microsoft Excel)
- MATLAB
- Bloomberg
- SQL (Microsoft SQL Server, MySQL, Oracle)
- R
- Stata
- LaTeX

PROFESSIONAL EXPERIENCE

Bank of America Charlotte, NC

Assistant Vice President, Quantitative Services Senior Professional Nov. 2021 – Present

- Utilize Python to design, build and implement machine learning models (multivariate OLS linear regression) to explain and predict collateral moves for OTC derivatives to support Treasury's cash and liquidity management, resulting in 85% prediction accuracy
- Build streamlined scripts in Python to conduct time series data backtesting analysis, visualize results, monitor performance and analyze gaps, leading to 50% time saving in gap analysis feedback cycle; present monthly status updates to stakeholders directly
- Perform ad-hoc scenario analysis and stress testing (CCAR) to provide insights and evaluate potential impacts to portfolio PnLs
- Team up with bank traders and IT to import batch/ real-time data, develop model enhancements and applications in Dev and Prod
- Work closely with Validation team to develop and maintain clear documentation (30 pages+) on methodologies and applications

State Street Corporation Burlington, MA

Product Specialist 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
- Created custom SQL queries to extract necessary data and conducted exploratory testing to evaluate robustness and functionality of products; designed, implemented and documented test plans, test strategies, test cases and test results
- Triaged client enquiries and performed research to identify new business opportunities, understand issues and determine solutions

University of Michigan Transportation Research Institute Ann Arbor, MI

Research Assistant Apr. 2019 – May 2019

- Utilized Python independently to collect and clean transportation data from 2014 to 2016 and got a sample with 4,000+ accident records related to travel patterns, driver behavior and crashes; conducted qualitative analysis and data visualization in Excel
- Implemented SMOTE algorithms and machine learning methods (logistic regression, random forest model) in Python to analyze data and build predictive models, realizing an accuracy at 80%; presented findings and key insights (60 pages+) to clients directly

PROJECT EXPERIENCE

Injury Biomechanics: 3D Head & Brain Modeling Jan. – Dec. 2018

- Applied principal component analysis and regression analysis in MATLAB to develop a parametric statistical model and make individualized skull and scalp predictions, resulting an accuracy at 40%
- Creatively invented a testing methodology to perform error validation and visualization compared with traditional fixed-size head models, demonstrating significant improvement with prediction error reduced by over 60%
- Collaborated with 6 students to present frequent technical design updates and final demonstration to stakeholders directly

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