MINXING XU

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EDUCATION

University of California, Santa Barbara Jan. 2025 - Present
Master of Art in Mathematical Statistics
GPA: 3.95/4.0

Core Courses: Applied Statistics, Statistical Inference, Statistical Data Science, Uncertainty Quantification, Bayesian Inference, Advanced Statistical Methods, Computational Techniques in Statistics

University of California, Santa Barbara Sept. 2022 – Dec. 2024
Bachelor of Science in Statistics and Data Science
GPA: 3.89/4.0 (High Honor, top 8.5%)

Core Courses: Data Science Principle, Multi-Variate Calculus, Discrete Mathematics, Mathematical Statistics, Stochastic Analysis, Regression Analysis, Data Structure and Algorithm, Machine Learning, Linear Algebra, Design of Experiment, Times Series, Applied Statistics, Statistical Inference, Fix Income Market, Derivative Market

INTERNSHIP EXPERIENCE

UCSB, *Teaching Assistance* Aug. 2024 -Present

- Hold teaching sections 4 times a week for undergraduate students in PSTAT 8 (Transition to Data Science, Probability and Statistics) , PSTAT 10 (Data Science Principles) , PSTAT 122 (Design of Experiment)
- Conducted weekly office hours and tutorials for 150 students, enhancing their understanding of core concepts
- Graded homework and exams, providing detailed feedback to professors on student performance

TF Securities Co. Ltd*, Data Analyst* Jul. 2023 - Sept. 2023

- Co-designed and maintained data visualization dashboards using Java and Power BI
- Enhanced risk assessment accuracy by adjusting parameters in risk management models using MATLAB, and implemented updates as patches in the company-wide daily alert system in Python

SELECTED PROJECTS

Research in Times Series*, Supervised by Prof. Gareth Peters* Sept. 2024 - Present

- Simulated diverse bond data using penalized splines and applied Kalman filtering to fit the dynamic Nelson-Siegel model for robust yield curve estimation
- Developed a model for optimal stopping times in fixed-income markets, focusing on multiple stopping opportunities for callable bond ladder portfolios and mortgage-backed securities

Research in Graph Theory*, Supervised by Prof. Uma Ravat* Jan. 2024 - July. 2024

- Explored voting patterns for Wikipedia administration rights on a directed graph with over 100,000 edges
- Applied community detection algorithms by using Louvain clustering and modularity optimization to identify sub-communities and voting dynamics

Research in Machine Learning*, Machine Learning Capstone* Oct. 2022 - June.2024

- Served as the team leader and led other members to build a machine learning model
- Analyzed existed data of students' attendance rate, course taken, prerequisite, native language, relevant courses, and multiple variables to establish a multi-variate regression model to improve the prediction accuracy

PROFESSIONAL SKILLS

Programming

- Proficient in Python, Java, R, SQL, Excel
- Familiar with Html, Javascript
- Knowledge of Machine Learning libraries and modules, including PyTorch, NumPy, TensorFlow
- Acquainted with Crawler and Automation modules such as Selenium, BeautifulSoup

Database Management

- Experienced with MySQL, Oracle, postgreSQL, SQLite
- Skilled in Amazon cloud database management such as Redshift
- Familiar with multi-system cooperation through the Docker system
- Capable of using Business intelligence platforms like Fine BI, Power BI, Quicksight