

MIAO YAN

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EDUCATION

Duke University, Pratt School of Engineering

Durham, NC

Master of Engineering, Risk Engineering

Aug. 2026 – Present

- Coursework: Business fundamentals for engineers, Risk and Resilience Engineering, ESG investing

Wuhan University, School of Economics and Management

Wuhan, China

Bachelor of Economics in Finance | GPA: 3.7/4.0

Sept. 2022 – June 2026

- Coursework: Data Analytics, Linear Algebra, Probability & Statistics

EXPERIENCE

Capgemini Invent

Beijing, China

Full-time Consulting Intern, Automotive Industry

Sept. 2025 – Dec. 2025

- Analyzed 10,000+ operational records using Python and SQL to conduct root-cause analysis for BMW, identifying key risk drivers and recurring operational issues to support data-driven risk mitigation and business improvement initiatives.
- Analyzed unstructured data from text, media, and calls to identify emerging business risks and develop recommendations to support the client's business development.
- Conducted peer analysis and created financial data visualizations in Excel; prepared quarterly reports and presentations highlighting key trends, performance gaps, and potential business risks to support strategic decision-making.

Haitong Securities

Ningbo, China

Full-time Investment Banking Intern

June 2024 – Sept. 2024

- Performed financial due diligence for IPO projects: reconciled 2019–2023 financial statements, investigated inconsistencies, and strengthened data integrity for valuation and prospectus preparation.
- Verified intangible-asset licenses and production-related data; performed asset reconciliation to assess the consistency and accuracy of information used in regulatory filing documentation.
- Collected and validated bank confirmations and legal materials to support audit procedures and the preparation of compliance documentation for shareholder meetings and regulatory filings.

CITIC Securities, Wuchang Branch

Wuhan, China

Feiying Program Intern, Wealth Management Division

Aug. 2023 – Sept. 2023

- Monitored daily stock index data and conducted industry analysis to identify potential excess-return opportunities; used risk measures such as Value at Risk (VaR) and maximum drawdown to assess market risk and inform investment analysis.
- Produced daily risk and market summaries for the investment team, synthesizing findings on market trends, sector rotation, and macroeconomic drivers through technical analysis and quantitative screening.
- Analyzed client risk profiles and behavioral data to support investment recommendations; compared mutual funds, ETFs, and bonds for portfolio optimization research.

PROJECT EXPERIENCE

Carnegie Mellon University, Data Science and Statistical Modeling with Python

Online

Dual-Professor Research Program

Aug. 2025 – Sept. 2025

- Applied data cleaning, visualization, statistical inference, hypothesis testing, k-means clustering, regression analysis, and cross-validation to UCI open datasets.
- Integrated probability theory, optimization, and data-driven analysis in independent research, strengthening quantitative problem solving for risk-focused decisions.

PUBLICATION

Yan, M. (2025, September). Leveraging K-means++ clustering for integrated data-driven decision-making in retail. In Strategic Human Capital Management in the Era of AI, symposium of the 4th International Conference on Financial Technology and Business Analysis (ICFTBA 2025). Advances in Economics, Management and Political Sciences (Print ISSN: 2754-1169). CPCI indexed.

- built a K-means++ clustering model on Apache Spark to enhance scalability and efficiency for large retail datasets.
- Highlighted limits in handling categorical and high-dimensional data; suggested hybrid and explainable AI solutions.

TECHNICAL SKILLS

Programming & Analytics: Python, SQL, R, Excel, Power BI | Methods: Statistical Modeling, Scenario Analysis, Financial Statement Analysis, Due Diligence, Risk Assessment