

Hangjun (Simon) ZHANG

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EDUCATION BACKGROUND

Northeastern University

Bachelor of Science in Data Science and Economics

Boston, MA

Sept. 2022 - May 2026

- **GPA:** 3.87/4.0
- **Core Courses:** Microeconomics & Macroeconomics Theory, Applied Econometrics, Machine Learning/Data Mining 1, Machine Learning and AI, Game Theory, Foundation of Data Science, Database Design
- **Honors:** Dean' List (for three consecutive semester, 2024 Spring, 2024 Fall, 2025 Spring)

Northeastern University London

Bachelor of Science in Data Science and Economics

London, UK

Sept. 2022 - May 2023

PROFESSIONAL INTERNSHIP

Natixis Investment Managers

Quantitative Research Analyst

Boston, MA

July 2025 - present

- Developed a quantitative framework to analyze the market impact of large-scale tax-loss-harvesting transactions; researched short-term price anomalies, portfolio risk exposure shifts, unintended factor tilts, and potential alpha signals arising from flow-driven trades.
- Performed pre-post analysis on trading data using Python (Pandas/Statsmodels) to audit transaction integrity and quantify discrepancies in realized gain/loss, informing subsequent model adjustments.
- Engineered automated pipelines (Python, SQL, regex) to reconstruct fragmented SQL statements, extract schema- and table-level metadata and validate daily ETL outputs (Informatica), auto-generating integrity reports and alerts.
- Deployed QuickSight dashboards to support cross-departmental monitoring and decision-making.

First Plus

Quant Researcher

Remote

May 2025 - July 2025

- Applied multi-factor risk model (Barra) to estimate time-varying idiosyncratic risk and covariance matrices for 5000+ securities, implementing rolling windows, data reshaping, and time-series pivoting to support econometric risk analysis for portfolio management.
- Implemented multiple covariance-matrix adjustments, such as Newey-West, Eigenfactor Risk Adjustment, and volatility-regime adjustment, to improve the stability and out-of-sample performance of risk forecasts.
- Evaluated the effectiveness of each adjustment technique by analyzing bias statistics across single-factor portfolios, random portfolios, and GMV portfolios to assess forecasting robustness.

IQIYI

AI Data Intern

Beijing, China

May 2024 - Aug. 2024

- Collaborated with the research team to develop two AI-based application products, a customer-service automation model that reduced departmental workload by 40% and a generative cartoon-production model enabling sub-3-minute content generation for end users.
- Utilized Dify for prompt engineering and Midjourney/Stable Diffusion for generative tuning, incorporating 200+ knowledge entries to fine-tune LLMs, achieving a 60% improvement in response quantification.
- Collected user data from web pages and applications using Python (BeautifulSoup, JSON, API), conducted performance analysis of user interactions, and adjusted AI parameters based on empirical findings.

RESEARCH EXPERIENCE

Cross-Sectional Factor Modeling and Performance Diagnostics in the A-Share Market

Research Assistant, supervised by Professor Jianfei Cao

Boston, MA

Aug. 2025 - present

- Conducted cross-sectional factor testing on A-share equities, evaluating valuation, quality, and risk factors (PE, ROE, Beta, Market Cap) using Spearman IC, t-tests, and long-short portfolio backtesting.
- Built automated performance metrics pipeline (Mean IC, ICIR, Hit Ratio, Sharpe, Max Drawdown) to benchmark and compare multi-factor combinations against a PE baseline model.
- Identified that valuation factor (PE) exhibits consistent predictive power, with Beta and Market Cap diminishing alpha, informing factor selection and model refinement.
- Constructed composite factors by integrating multiple signals to evaluate their incremental explanatory power and robustness across market regimes.

Empirical Analysis of Job Search and Matching in Online Labor Markets

Research Assistant, supervised by Professor Shuo Zhang

Boston, MA

Jan. 2025 - June 2025

- Designed an automated pipeline to classify and standardize new employees' academic majors, improving data-processing efficiency and supporting scalable labor-market analytics.
- Processed and harmonized 1M+ labor-force entrant records using Python, conducting schema normalization, multi-stage cleaning, and integrity validation to create reproducible datasets for labor-economics research.

PROFESSIONAL SKILLS

Programming: Python (Libraries: Pandas, Numpy, Matplotlib, etc), R, SQL

Quantitative: Machine/Deep Learning (SVM, PCA, Random Forest, Neural Networks, etc), Time Series Analysis, Barra Factor Model, Statistics (Newey-West, Structural Model, etc), Monte Carlo Method