Yixuan (Anna) Huo

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Education

University of Illinois Urbana-Champaign — **Champaign, IL**
Master of Science in Financial Engineering - Grainger College of Engineering — *Sept. 2024 – Dec. 2025*

Tsinghua University — **Beijing, China**
Bachelor of Economics and Finance - School of Economics and Management — *Sept. 2020 – Jul. 2024*

- Honors: 2nd Place in 2021 **Ernst&Young** ESG Innovation Challenge (team leader), 1st Place in 2022 **KPMG** Global Thinking Challenge (team leader), **Scholarship** in 2020 & 2021 Tsinghua University Literature Excellence

Professional Skills

- **Programming languages:** Python (NumPy, Pandas, Matplotlib, Scipy, Scikit-learn), SQL, R, SAS, LaTeX
- **Platforms:** Bloomberg Market Concepts Certification, thinkorswim (Simulated trading platform), MySQL, WRDS
- **Courses:** Fixed Income, Machine Learning, Financial Computing, Structured Credit, Multivariate Statistics, Stochastic Process, Linear Regression, Econometrics, Hedge fund strategies and trading, Mergers & Corp. Reorganizations, Data Analytics

Professional Experience

Figure Lending LLC — **San Francisco, California (remote)**
Data Analyst at the Structured Finance — *Aug. 2024 – Present*

- **Mortgage Amortization:** Implemented 3-year amortization schedules for Mortgage Backed Securities corporating Prepayment and Default (SMM/MDR). Verified cashflow mechanics for different loan amounts and maturities
- **Optimal Bid Prices Analysis:** Stressed tested bond yield under scenarios with different original amount, prepay, and default rates. Determine optimal bid prices based on the bonds' average spread and yield on the market value

Aitopia, Beijing Aitopia Artificial Intelligence Technology Co., LTD — **Beijing, China**
LLM/ Deep Learning Model for Stock Direction Prediction — *Apr. 2024 – Jun. 2024*

- **Feature Engineering**: Utilized PyTorch DataLoader to manage a 3D dataset with 3 billion tokens. Applied BatchNorm and configured batch size, sequence length, and embedding dimensionality for model inputs
- **Parameters Optimization**: Set the parameters based on the OPT and Megatron models. Utilized Transformer blocks and Softmax for probability prediction. Achieved 80% accuracy and 13% annual return. Visualized results by loss plots

McGill Desautels Faculty of Management — **Montreal, Canada**
Quantitative Trader — *Jan. 2023 – Apr. 2023*

- **Multi-Asset Trading**: Executed a global macro strategy across FX, equity, and fixed income markets. Overweighted USD in the FX market, leveraging Fed rate hikes and strong U.S. economic data. Employed strategy with hedge techniques, utilizing discounted cash flow models and technical indicators, achieving a 5% profit in 3 months

Moody's — **Beijing, China**
Risk Analyst at MIS Rating group — *Jul. 2023 – Nov. 2023*

- **Risk Modeling**: Utilized Machine Learning, including OLS and Logistic models to predict credit ratings. Enhanced model accuracy by optimizing parameters for financial variables, improved classification performance by 33%
- **Macroeconomics Data Analysis**: Implemented Python and VBA on 3-year LGFV data extracted from Bloomberg API. Visualized and compared provincial fiscal indicators to provide state-level options for SOE's credit notching

Beijing Prism Private Equity Co., Ltd — **Beijing, China**
Quantitative Researcher, Equity and Derivative — *Mar. 2022 – Aug. 2022*

- **Co-Integration Arbitrage**: Applied Johansen's co-integration test on gold and silver futures. Identified long-term equilibrium and exploited price spread deviations using mean-reversion strategies
- **Volatility Surface Arbitrage**: Simulated and backtested arbitrage strategies on past 3-year short-term ETF options. Detected calendar spread and butterfly arbitrage opportunities, validating quantitative funds' profitability
- **Monte Carlo Simulation Option Pricing**: Implemented the Heston model for Option Pricing using Monte Carlo simulation. Leveraged multithreading for efficiency, and applied antithetic variates for variance reduction to enhance pricing precision
- **Object-Oriented Programming Engineer**: Developed a 2-years ETF option database using Python OOP. Crawled data from WIND API and designed table structures with SQL, implementing automated daily updates algorithm on MySQL

Statistics Research Center, Tsinghua University — **Beijing, China**
Quantitative Researcher, Equity Market — *Jan. 2022 – Apr. 2022*

- **Backtesting**: Constructed momentum factors using daily, weekly, and monthly turnover rates. Calculated IR, IC. Applied Newy-west t-test. Plotted long-short return. Achieved stratification and a 10% annualized return with daily rebalancing
- **Clustering**: Optimized K-means clustering, factor, and Fisher discriminant analysis to built a 7-factor model

Additional Information

- Interests: Dancing(15+ years, main member of Tsinghua Dance Team), Traveling (Travelled on my own to Jordan, Israel, Palestine, and Egypt for two months), Aerobics(1st place in school competition), Volunteering (Vice President of Education Poverty Alleviation Association, "2021 National Knowledge and Action Social Practice Excellence Award"), Body combat