YANG, Yifan

franxyang.github.io | yifanxyang@gmail.com | yyang773@wisc.edu | +1 (608) 621-8188

EDUCATION

University of Wisconsin - Madison | 3.8/4.0 GPA *Sep 2023 - May 2027*

- B.S. **Mathematics** (*Honor*), **Economics** (*Math Emphasis*), and **Data Science** | Certificates: **Computer Science, Business**
- ***Courses***: Data Science Programming (Python & R), Mathematical Modelling (Matlab), Stochastic Process, Numerical Analysis, PDE Analysis, Real Analysis, Macroeconomics, International Trade, Growth Economics, Accounting
- UW-Madison Scholarship ($15k in total): *2023Fall*, *2024Spring*, *2024Summer*

PROFESSIONAL EXPERIENCE

Plug and Play, China *Sep 2025 - Nov 2025*
Intern, Investment Analyst *Shanghai (hybrid), China*

- Conducted industry and market research on embodied AI, robotics, and applied AI; synthesized findings into concise briefs for investment associate.
- Supported accelerator operations end-to-end—source and screen startups, run initial diligence, maintained pipeline CRM, and coordinate mentor matching and PoC pilots with enterprise partners.

Guosheng Securities Co., Ltd. *Jul 2025 - Sep 2025*
Intern, Quantitative Research *Shanghai (hybrid), China*

- Developed an automated pharma-fund screening pipeline that identified 171 pure funds (≥80% pharma) from 3,000+, cutting manual review from 2 hours to 5 minutes (24x).
- Led cross-sectional factor attribution on 171 funds (market cap, P/E, dividend yield); found large-cap and high-dividend exposures significantly reduce max drawdown (R^2=34.8%, $p<0.01$), informing ~200M RMB allocation.
- Re-engineered the portfolio backtesting engine with vectorized computation and Parquet I/O; improved 1M-row processing from 120s to 2.4s (~50x) and reduced error to <0.01%, validated via 1,000+ portfolio stress tests.

CITIC Securities Co., Ltd. *May 2025 - Jul 2025*
Intern, Quantitative Research *Beijing, China*

- Independently architected and implemented a high-throughput news ingestion pipeline, processing 20K–30K market news articles daily; developed an end-to-end NLP workflow leveraging pre-trained language models (e.g., GPT, DeepSeek, Gemini) to automatically extract and summarize stock-level price-movement drivers.
- Built an automated ETF factor mining tool using Microsoft's open-source Qlib core: designed custom factor definitions, fine-tuned and adapted models, orchestrated distributed training, and conducted backtests to validate signal robustness, significantly enhancing factor generation efficiency and strategy performance.
- Utilized Python, Pandas, NumPy, and PyTorch/Tensorflow to write modular, reusable code; implemented data-processing scripts and model training pipelines that reduced development time and improved team productivity.

Shanghai Pudong Development Bank, Hong Kong Branch *Jun 2024 – Aug 2024*
Intern, Financial Institutions Department *Hong Kong SAR*

- Independently analyzed 5-year operational performance of Chinese bank-affiliated investment banks, covering financial metrics, business strategies, and competitive landscape. Developed data models and trend analysis to support departmental decision-making. The analytical framework and documentation were adopted as templates for future use.
- Contributed to a syndicated loan project by assisting in due diligence, financial modeling, and contract term reviews, gaining hands-on experience in cross-border collaboration and compliance analysis.

Guosheng Securities Co., Ltd. *Jun 2023 – Aug 2023*
Intern, Fixed Income Research *Remote*

- Supported analysts in producing periodic interest rate market reports, compiling historical yield curve data (2018–2023) for key treasury maturities and analyzing impacts of monetary policy shifts and macroeconomic events.
- Maintained and updated a fiscal debt database for 300+ prefecture-level cities, tracking 12 core indicators (e.g., debt balances, LGFV bonds). Implemented early-warning mechanisms for financing costs and debt ratios to enhance credit risk assessments.

RESEARCH EXPERIENCE

Neural Network Parameterization for PDE-Constrained Optimization *Sep 2025 - Dec 2025*
Madison Experimental Mathematics(MXM) Lab | Advisor: Prof. Yukun Yue *Department of Mathematics, UW-Madison*

- Implemented neural network parameterizations that enforce hard constraints via constraint-aware output activations, turning a constrained PDE-control problem into unconstrained optimization over network weights.

The Effect of the Hong Kong Political Change during 2019 on Trade *Sep 2024 - Dec 2024*
Thesis | Advisor:Prof. Lydia Cox *Department of Economics, UW-Madison | Intro Slides | View Here*

- Applied a difference-in-differences approach comparing Hong Kong and Singapore using trade data from 2005–2023 to assess the impact of 2019 protests and policy changes.

Impact of Municipal Bond on Local Economic Growth *Jan 2024 - May 2024*
Honor Thesis | Advisor: Prof. Simeon Alder *Department of Economics, UW-Madison | View Here*

- Employed OLS and panel data methods to examine the impact of municipal bond issuance on local GDP growth in Chinese prefecture-level cities. findings reveal significant regional variations and diminishing marginal returns.

Measure Theory – Directed Reading Program *Sep 2023 - Dec 2023*
Undergraduate Participant *Department of Mathematics, UW-Madison*

- Explored advanced measure theory topics including Lebesgue integration, sigma-algebras, and convergence theorems under the mentorship of a PhD student. Participated in weekly seminars and delivered a final presentation summarizing key insights.

SKILLS

Programming	Python, R/RStudio, MATLAB, Stata, Java, MySQL, C/C++
Technical	Excel, Power Point, LaTeX, Bloomberg Terminal (with BMC Certificate), and actively exploring new AI agents & models
Languages	Mandarin (native), English (fluent), Cantonese (basic)
Academic Focus	Macroeconomics, Growth Economics, International Trade, Quant Research, LLM