Tiantian (Olivia) Xie

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EDUCATION

The University of Chicago — **Chicago, IL**
M.S. in Financial Mathematics (GPA: 3.72/4.0) — **Aug 2023 - Dec 2024**
- Courses: Portfolio Theory & Risk Management, Quantitative Trading Strategies, Option Pricing, Stochastic Calculus

New York University — **New York, NY**
B.A. Double Major in Mathematics and Economics (GPA: 3.77/4.0, graduated in 3 years) — **Aug 2019 - May 2022**
- Courses: Numerical Analysis, Math of Finance, Experimental Economics, Analysis, Intro to Math Modeling

SKILLS AND CERTIFICATES

Computer Skills: Java, Python (Pytesseract, Unstructure), R, MATLAB, Excel, Word, PowerPoint, SQL, C++
CFA: Level I
Language: Mandarin

EXPERIENCE

StepStone Group LP — **San Diego, CA**
Portfolio Management Intern — **May 2024 – Aug 2024**
- Utilized Large Language Models (LLMs) to extract insights from unstructured texts in quarterly reports and distribution notices
- Used LlamaIndex and Langchain to improve LLM-generated responses' accuracy, completeness, and hallucination
  - Deployed LlamaIndex's Guideline Evaluator to perform reinforcement learning on responses
  - Prompt engineering: hand-tuned a variety of provided examples and grounding contexts
  - Preprocessed reference documents with LangChain's text splitter and node parser to improve contextual retrieval
- Tuned implementation of Retrieval-Augmented Generation (RAG) for increased response relevance and accuracy
- Designed a user-friendly dashboard to serve finished product to users with access to the company's internal database
- Authored a comprehensive notebook solution including TreeSummarizer, DSPy, and standard query engines

Bodhi Research Group — **Chicago, IL**
Quantitative Research Intern — **Mar 2024 – May 2024**
- Conducted portfolio diagnostics on a hedge fund for a pension plan, and contributed to a client deliverable report

Bank of America — **Chicago, IL**
Quantitative Researcher – Project Lab, University of Chicago — **Jan 2024 – Mar 2024**
- Tested advanced natural language processing capabilities for LLMs in financial analysis
- Employed Python, Llama Index, Langchain, and ChatGPT to analyze and verify the data accuracy related to Bank Assets & Liability Management under SEC

Carnegie Park Capital — **New York, NY**
Analyst — **Jun 2022 – Jun 2023**
- Developed an Excel-based financial model using Monte Carlo simulation to forecast share price movements and incorporating variables such as price hurdles, volatility, and risk-free rates for the assessment of earnout share vesting restrictions at CPC
- Utilized quarterly database to construct regressions and perform revenue forecast for investment projects
- Monitored new IPOs on SPAC RESEARCH website and Bloomberg, created an Excel database on deal details by sorting announced, IPO, deadline, and closed dates
- Searched 8-K filings and new IPO investor presentations to record and analyze forecasted future firm values including financial sales, EBITDAs, CapEx, and EBITs
- Participanted in daily team meetings, engaged in client discussions to strategize target company acquisitions, and attended quarterly conferences for the latest SPAC trends

NYU Shanghai — **Shanghai, China**
Academic Resource Center Learning Assistant — **Jan 2021 – May 2021**
- Worked with ARC staffs and assisted students in developing knowledge base and strategies in mathematics and economics

CMB Leasing — **Shanghai, China**
Financial Lease Summer Intern — **Aug 2020 – Sep 2020**
- Analyzed periodic business transaction sums and total assets among international banks to steer potential investments
- Investigated research on venture capital and presented collated and illustrated information to team members

MATH RESEARCH

Comparison of Methods for Solving Ordinary Differential Equations — **Sep 2021 – Nov 2021**
- Used Python Evaluated convergence rate using classical fourth order Runge-Kutta method, trapezoidal method, fixed point method, midpoint method, and Euler's method through Python