

# GUANGYU (DANIEL) HOU

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## EDUCATION

Expected 12/26	<b>NEW YORK UNIVERSITY</b> <b>The Courant Institute of Mathematical Sciences</b> <b>M.S. in Mathematics in Finance</b> <ul style="list-style-type: none"><li>• <i>Expected Coursework:</i> object-oriented programming (Java), penalized regression, decision trees, linear regression, Black-Scholes, stochastic processes, Hull-White model</li></ul>	New York, NY
09/21 – 06/25	<b>NANKAI UNIVERSITY</b> <b>B.S. in Mathematics and Applied Mathematics</b> <ul style="list-style-type: none"><li>• <i>Coursework:</i> real analysis, PDE, Python, Probability, Stochastic process, Financial option</li><li>• <i>Honors/Awards:</i> Social Welfare Scholarship, Nankai University (top 2%), National Undergraduate Innovation and Entrepreneurship Project Award (top 10%)</li><li>• <i>Thesis:</i> “Optimal Investment under Common Noise, Idiosyncratic Noise, and Contagious Jump Risk” (Applications of Mean-Field Games in Optimal Investment and Hedging)</li></ul>	Tianjin, China

## EXPERIENCE

06/25 - Present	<b>ZHONGTAI SECURITIES</b> <b>Fintech Intern (Python)</b> <ul style="list-style-type: none"><li>• Collaborated on building foundational models on macroeconomic and capital market data</li><li>• Developed quantitative strategies for ETF in A-shares markets with 14% APY</li></ul>	Shanghai, China (Remote)
09/24 - 11/24	<b>CHINA EVERBRIGHT BANK</b> <b>Data Asset Management Intern (Python)</b> <ul style="list-style-type: none"><li>• Analyzed and derived theoretical implications of algorithmic evolution, assessing their potential for large language model (LLM) integrations</li><li>• Experimented with combining Actor-Critic algorithm with PPO algorithm to enhance performance of open-source large language models within banking industry</li></ul>	Beijing, China
07/24 - 09/24	<b>CHINA FUND MANAGEMENT CO., LTD</b> <b>Data Analyst and Quant Developer Intern (Python)</b> <ul style="list-style-type: none"><li>• Developed Python scripts and optimized PySpark workflows to filter out anomalies and missing data in stock futures from Wind data source; improved efficiency by 50%</li><li>• Integrated Tonghuashun API to replicate Wind API functionalities, enabling strategy execution, order placement, and cross-validation of data for enhanced system reliability</li></ul>	Beijing, China

## PROJECTS

04/24 - 10/24	<b>JOHNS HOPKINS UNIVERSITY</b> <b>Feasibility of Transfer Learning and MFG Model Adaptability</b> <ul style="list-style-type: none"><li>• Explored optimal transport to address domain adaptation challenges that form foundation of transfer learning</li><li>• Studied mean field equilibrium to efficiently approximate n-player Nash equilibria, with particular emphasis on their benefits and underlying procedures</li><li>• Investigated applications of mean field games across various models, analyzing how to design specific types of games and their potential real-world implementations</li></ul>	Baltimore, Maryland (Remote)
01/23 - 03/25	<b>NANKAI UNIVERSITY</b> <b>New Media Marketing Strategy for Time-Honored Chinese Brands (Python)</b> <ul style="list-style-type: none"><li>• Conducted consumer sentiment analysis to explore methods for understanding emotions behind consumer reviews, providing strategic direction for new media marketing</li><li>• Used Python for data collection and analysis, focusing on key performance indicators to evaluate current state of new media marketing for time-honored Chinese brands</li></ul>	Tianjin, China

## COMPUTATIONAL SKILLS / OTHER

**Programming Languages:** Python, C++

**Languages:** English (fluent), Mandarin (Native)

**Activities:** Exchange Student, UC Berkeley, advanced coursework in probability and stochastic processes; Vice Minister of Sports Department in Student Union of Nankai University