

**Colin Yao**  
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## EDUCATION

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### The University of Chicago

*Bachelor of Sciences in Mathematics*

*Bachelor of Sciences in Computer Science*

*Bachelor of Arts in Economics*

GPA: 3.74 / 4.00

Chicago, IL

Expected, June 2025

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Expected, June 2025

**Roles:** Dean's List, Halperin House President, Maroon Capital Member

**Courses:** Honors Analysis in Rn (graduate level), Honors Graph Theory (graduate level), Honors Elements of Economic Analysis, Honors Discrete Mathematics, Intro to Database Systems, Honors Econometrics, Honors Theory of Algorithms

**Achievements:** USA Math Olympiad Qualifier (top 250 nationwide), US Presidential Scholar, National Merit Scholar

## EXPERIENCE

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### TradeLink LLC

*Trading Intern*

August 2023 - September 2023

Chicago, IL

June 2024 - Present

- Researched and implemented from scratch a system for tracking and displaying Value at Risk using live data, which reduced unnecessary risk, greatly reduced the frequency of outsize losses, and permitted active risk management
- Implemented and tested trend-following and mean-reverting strategies for trading currency futures
- Collaborated with traders and quantitative researchers in optimizing and backtesting trading strategies

### University of Chicago Mathematics Research Experience for Undergraduates

*Undergraduate Researcher*

Chicago, IL

June 2023 - August 2023

- Performed a review of literature relating to transportation theory in economics
- Wrote a paper on Monge-Kantorovich duality and its application to principal-agent problems. [Link to paper](#)

### Center for Translational Data Science at the University of Chicago

*Software Development Intern*

August 2021 - September 2021

Chicago, IL

June 2022 - October 2022

- Collaborated with a team of 7 on the creation of a new Continuous Integration tool to automate a release cycle
- Created and tested a relational database in PostgreSQL, with Database Access Objects in SQLAlchemy
- Helped design and build a schedule-based interface for task execution and chaining in Python
- Containerized applications using Docker and Kubernetes for running on remote machines

### 1104Health

*Data Analyst Intern*

Chicago, IL

July 2022 - October 2022

- Used SQL and Python to analyze and create actionable insights from unstructured medical study data
- Created protocol for extracting semantic meaning from healthcare location names
- Created deduplication process to reduce the size of a locations database by 30%

## PROJECTS

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### Fama-French Backtesting ([github](#))

- Implemented a Python backtesting framework to investigate performance of a trend-following trading strategy
- Presented on the application of the Fama-French valuation model to mean-reversion trading

### PDF Webcrawler ([github](#))

- Created a webspider from scratch to retrieve PDF files from websites using Scrapy and BeautifulSoup
- Implemented recursive traversal and basic error-checking functionality

## SKILLS

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**Languages:** Native fluency in English, fluent in Chinese, proficient in Spanish

**Computer:** Experienced with Python, Java, Rust, PostgreSQL, SQLAlchemy. Proficient in Git / Github and Microsoft Office, and experienced with C and FastAPI. Proficient in R for data science and analytics. Experience with Docker and Kubernetes for containerization. Experience using Pandas for vectorized calculations.