

Jihui (Todd) Tan

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EDUCATION

The University of Chicago

Chicago, IL

Master of Science in Financial Mathematics

Expected December 2025

- Courses: Optimization, Stochastic Processes, Option Pricing, Portfolio & Risk Management

Joint B.S./M.S. in Computer Science | B.A. in Economics (GPA: 3.535/4.0)

June 2024

- Courses: Advanced C++, Machine Learning, Networks, Operating Systems, Databases, Cloud Computing, Web Development, Statistics, Probability, Multivariable Calculus, Numerical Linear Algebra, Algorithms, Data Structures, Trading, Investments, Money and Banking, Econometrics, Printed Circuit Board, Robotics, iOS Development

SKILLS

Programming Languages: Python, C, C++, SQL, R, Ruby, Javascript, Java, Swift, HTML/CSS

Frameworks: Flask/Quart, Ruby on Rails, React, Node.js, SwiftUI, UIKit, ROS(rospy), WordPress

Developer Tools: git, Numpy, Pandas, Matplotlib, Docker, AWS, Azure, Selenium, Arduino, KiCAD, Fusion 360

Generative AI Tools: Llama, ChatGPT, Elevenlabs, Midjourney, Dall-E, Suno, SoulMachine

EXPERIENCE

DV Trading LLC

Chicago, IL

Quantitative Researcher - University of Chicago Project Lab

October 2024 - present

- Developing C++ parsers for market data PCAP files, and building trading strategies in Python

Cleolabs AI (startup)

Chicago, IL

AI Software Engineer

March 2024 - August 2024

- Ideated and built web app in Python and JavaScript for children with autism to engage with AI speech therapist, leveraging Node.js, Quart, Azure, MongoDB, SoulMachine, DALL-E, ChatGPT, and Llama
- Collaborated with speech therapists to devise metrics for tracking children's communication improvements on platform
- Won 3rd place among 50 teams in 2024 Chicago Booth Global New Venture Challenge with \$15,000 award

Chicago Trading Company

Chicago, IL

Data Science Intern - University of Chicago Data Science Clinic

March 2024 - May 2024

- Led development of automated X data collection and preprocessing pipeline in Python, and created API endpoint for team data access to expedite model development, leveraging Flask, AWS EC2, S3, and Retriwi API
- Increased data volume tenfold and model accuracy by 3%

Outlier AI

Oakland, CA

Software Engineer - AI Consultant

February 2024 - May 2024

- Designed over 300 prompts to break large language models, assessed model responses through analytical commentary, and wrote over 15,000 lines of code in Python(Numpy, Pandas), SQL, and JavaScript based on constructed prompts

GridLink

Chicago, IL

Software Engineering Intern

January 2024 - March 2024

- Designed and built Python Flask-based benchmarking system to assess performance of EV fleet charging algorithms, facilitating automated test generation, time and memory data measurement, storage, and visualization in matplotlib

Morningstar, Inc

Chicago, IL

Data Science Intern - University of Chicago Data Science Clinic

September 2023 - December 2023

- Conceived and developed an ensemble-based fact-checking model in Python within four-member team using ChatGPT API to verify AI-generated reports from analysts' notes, achieving 80% precision and 95% recall in error identification

PROJECTS

Turtlebot2 Project([GitHub](#))

March 2024 - May 2024

- Implemented particle filter localization, Q-learning for item organization, and A* pathfinding in Python rospy

Pintos Operating System([GitHub](#))

September 2023 - December 2023

- Implemented thread scheduling, system calls, user program management, virtual memory, and file systems in C

AWS Genomics Annotation Service

September 2022 - December 2022

- Built in Python, using Flask and AWS boto3 for EC2, S3, Lambda, SNS/SQS, Step Functions, DynamoDB, and Glacier

ADDITIONAL INFORMATION

Certifications: HackerRank C++ Gold Level Badge

Languages: Mandarin (native), Spanish (intermediate), Japanese (intermediate), Korean (basic)

Interests: Singing, organizing, poetry, culinary exploration, detective games, ideation