

Allen Tian

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EDUCATION

University of Chicago

Computer Science, Business Economics

Sep. 2023 – June 2027

Chicago, IL

- Financial Markets Program, Fraternity of Phi Gamma Delta, Varsity Track and Field

WORK EXPERIENCE

Machine Learning Student Researcher

NC State University, Texas State University

Aug. 2022 – July 2024

Various Locations

- Involved in the building and programming of racecars at NCSU's autonomous racing program
 - **Became Proficient in ROS and helped program the F1Tenth vehicles pathfinding algorithms**
 - Assigned to the AWS DeepRacer project working on reward function development and vehicle training
- Assigned to the AWS DeepRacer project at Texas State University through REUEC Program
 - Worked on training and testing of existing reward functions in the newly developed head-to-bot mode
 - Developed a prototype reward function tailored to the head to bot racing mode by experimentation with different reward distributions, **outperforming existing reward functions in the head-to-bot mode**
 - [First author of paper accepted for REUNS 2023 conference and publication in ACM library](#)
- Worked on applying RL algorithms to the F1Tenth racing project at the NCSU Algorithm Design REU
 - Using F1Tenth Gym, **was able to tailor and develop a reward function to train a model that efficiently navigates a track at jogging pace with little crashes**
 - There is little documentation on usage of RL in F1Tenth, with majority utilizing pathfinding algorithms

Machine Learning Research Assistant

University of Central Florida

Feb. 2022 – Aug 2022

Orlando, FL

- Involved in research paper GLARE: A Dataset for Traffic Sign Detection in Sun Glare
 - Developed a deep understanding of Deep Convolutional Neural Networks
 - Applied programming skills and knowledge of DCNN's to help achieve results in the project
 - Responsible for many visuals as well as statistics section of paper, which were all included in pub version
 - [Paper published in IEEE Transactions on Intelligent Transportation Systems](#)

Freelance Computer Business

Founder

April 2020 – Feb. 2022

Chapel Hill, NC

- During the covid-19 pandemic, founded a freelance computer business offering a variety of computer related services including building, fixing, and cleaning/maintenance of computers
 - Contracted and managed a small team to effectively complete jobs while balancing other commitments
 - **Completed over 400 jobs over the course of the business, generating over 16k in revenue**
 - Promoted my business through local online forums and job boards such as Next-door

PROJECTS

Retail Investor and Options Trader

Aug 2021 – Present

- Managing a personal portfolio with the capital generated from the freelance computer business
 - Consistent profits achieved using multiple stock and options strategies (Long Call, Long Put)
 - Executing trades in a risk-controlled manner, evaluating factors such as volatility and expected profit to determine size and price of trades
 - Utilizing options to protect portfolio from catalysts

SKILLS & INTERESTS

- **Skills:** Competitive, Quick Learner, Planning, Problem Solving, Easygoing
- **Interests:** Weightlifting, Fishing, Golfing, Cooking