

# CONNOR RICHARDSON

(631) 942-6451 | [connorrichardson@gatech.edu](mailto:connorrichardson@gatech.edu) | [linkedin.com/in/connorrichardson5](https://www.linkedin.com/in/connorrichardson5) | [github.com/connorrich](https://github.com/connorrich)

## EDUCATION

### Georgia Institute of Technology, College of Sciences

Atlanta, GA

Candidate for Bachelor of Science in Mathematics

August 2022 – December 2024

**Relevant Coursework:** Data Structures and Algorithms, Introduction to Database Systems, Abstract Linear Algebra, Introduction to Object-Oriented Programming, Probability Theory, Statistical Theory, Machine Learning

## WORK EXPERIENCE

### Vertical Dynamix Inc.

May 2024 – Present

Machine Learning Intern

Atlanta, GA

- Currently developing and implementing machine learning models by combining **DepthAnything for metric depth estimation and YOLOv8 for object detection**, enabling precise and accurate measurement of object dimensions in images
- Automating object dimension measurement in photos, **eliminating manual processing and reducing field personnel and post-processing efforts**. Demonstrating the project's potential to cut manual processing time and costs by 50%
- Deploying and managing models on **Microsoft Azure using Azure Virtual Machines and SQL Databases**, ensuring scalability and reliability. Integrating solutions seamlessly into existing workflows to enhance operational efficiency

### Global Electrical Contracting

May 2020 – July 2022

Back Office

Dix Hills, NY

- Actively assisted with project planning, cost estimation and scheduling from the office, using Excel to track projects as well as maintaining inventory, including management and staging of tools, leading to a **15% increase in operational productivity**
- Collaborated seamlessly and professionally with **12+ property managers** and **over 2000 residential clients**, ensuring exceptional job completion that aligned with their specific requirements and preferences
- Spearheaded a transition from an all paper management system to cloud based data management system using Excel, Python Scripts, and GitHub Workflows—**reducing annual billing costs by \$30,000 and saved \$250,000 in unbilled jobs**

## RESEARCH AND PROJECTS

### Mathematics Research Apprentice | Georgia Tech

June 2024 – Present

- Conducting research on the properties of **heavy-tails** and the **estimation of power-law distributions** with Professor Mayya Zhilova
- Analyzing and studying probability metrics, focusing on their bounding properties and the relationships between different metrics

### Sports Betting Bot | Python, MySQL, NextJS, HTML, CSS

August 2022 – December 2023

- Developed a bot that automatically identifies arbitrage bets of **3% and up** in the MLB, NFL, NHL, and NBA betting markets
- Transformed the sports betting bot into an efficient and scalable solution by migrating it to an **AWS Lambda Function**, enabling seamless data retrieval from all NY sports betting markets through maintained **Python data pipelines**
- Employed advanced web scraping techniques, including network requests, API interaction, and **circumvention of API limits**, to extract over **20,000 lines and odds**, and seamlessly matched and organized them into **Pandas DataFrames** while also converting them into JSON format for enhanced data processing and market analyzation
- Utilized Pinnacle, a leading bookmaker known for their sharp odds, to automatically identify mispricing's in other sports books for positive expected value betting opportunities ranging from **1% and up**
- Designed and implemented a **MySQL database to archive and analyze sports betting lines and odds, facilitating the identification of line shifts and the evolution of these lines and odds over time, visualized through charts**

### Airline Management App | SQL, Express, Javascript, React, MySQL, HTML, CSS

January 2023 – May 2023

- Co-developed an airline management app, which involved breaking down a complex description of airline processes and creating a **relational schema** with 14 tables, 19 stored procedures, and 6 views, enabling full simulations of airline operations
- Employed NextJS pages and React components to create modular structures for tables, views, and procedures
- Developed an Express backend, leveraging **MySQL connections** and modularizing requests for efficient database interactions

## INVOLVEMENT AND LEADERSHIP

### Kappa Sigma Fraternity

January 2023 – December 2023

Philanthropy Chair

Atlanta, GA

- Organized fraternity-wide community service events via local outreach and collaboration with non-profit organizations: Piedmont Park Conservation, Red Cross Blood Drive, Georgia Tech Campus Kitchen, Books for Africa; **totaling 300+ community service hours**
- Facilitated collaboration with **25+ Fraternities and Sororities** to ensure successful execution of community service events

## SKILLS & INTERESTS

**Languages:** Python, Java, SQL

**Libraries & Backend Services:** AWS Lambda, Azure, OpenCV, Pandas, NumPy, Git, Flask

**Databases:** MySQL

**Interests:** Poker, Golf, Lacrosse, Baseball, Sailing