# AMOGH MADIREDDI

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## EDUCATION

**University of Michigan** **Ann Arbor, MI**

*B.S. in Computer Science,* GPA: 4.00 / 4.00 *August 2022 - May 2025*

- Data Structures and Algorithms, Computer Architecture, Web Systems, Introduction to Machine Learning, Discrete Mathematics, Theory of Computation, Linear Algebra, Honors Real Analysis

## WORK and PROJECT EXPERIENCE

**Michigan Data Science Team** **Ann Arbor, MI**

*Project Lead* *January 2023 - Present*

- Led group of 20+ students in analyzing college football data using Python, PySpark, NumPy, and Pandas that resulted in a website allowing users to see trends most common among winning teams and the strategies they typically employ
- Conducted extensive research using the entire IMDB movie database with Python to identify trends in movie ratings, genres, and actors, culminating in a final project presentation at the club expo

**VOID Tech** **Ann Arbor, MI**

*Developer* *September 2023 - Present*

- Developed a user-friendly website to facilitate the discovery of study groups and available study rooms on campus, addressing the challenges of the previous system to improve the academic experience for University of Michigan students
- Enhanced my technical skills and underscored the importance of user-centered design and problem-solving in software development using Python, Flask, PostgreSQL, and React

**University of Michigan Math Department** **Ann Arbor, MI**

*Linear Algebra Proof Tutor* *January 2023 - Present*

- Worked with a group of 20+ student and faculty members to pinpoint ways students could understand material effectively
- Aided 30+ Linear Algebra students with proof homework reinforcing material from class and helping them develop problem solving skills in a 1 on 1 environment outside of class while sharing my own advice

**General Motors** **Detroit, MI**

*Test Technician* *June 2022 - August 2022*

- Built a MATLAB GUI that allows users to analyze wind tunnel aerodynamic and pressure sensor data and customize selections from 30+ pressure data sources and display it accordingly to ultimately optimize vehicle aerodynamics for cost
- Collaborated within a 10+ member team to meet project deadlines, gaining valuable insights into vehicular design and testing processes at major automakers, focused on enhancing fuel efficiency

**University of Michigan** **Ann Arbor, MI**

*Undergraduate Researcher* *June 2021 - August 2021*

- Contributed to a collaborative university lab group of 10+ members, where I conducted in-depth research by analyzing bioinformatics articles to identify prior approaches to vaccine design for viruses using Python, PySpark, and TensorFlow
- Conducted extensive analysis of the National Institute of Health vaccine and drug database and developed a potential method using Python and ontologies to leverage existing virus RNA data and medications for combating emerging viruses
- Finished a research abstract that was featured on the Summer 2021 Undergraduate Research Opportunity Program website

## PROJECTS

**Stock Portfolio Management Simulator**

- Built platform for users to simulate trading stock listed on NASDAQ/NYSE at live prices utilizing the IEX stock API to help give beginning investors practice trading and learning more about the market before putting their own money at risk
- Made use of Python to connect a Flask framework and SQL database that stored user data and carried out trades with an interactive front end made with HTML, CSS, Javascript and the Bootstrap framework

## SKILLS

*Programming Languages:* Python (*PySpark, Tensorflow, Flask, Pandas, NumPy*), C/C++, MATLAB, SQL, HTML, CSS, JavaScript
*IDEs and Operating Systems:* Visual Studio Code, Linux, Ubuntu (WSL), Windows
*Other Skills, Frameworks, and Certifications:* Github, Git, Azure Cloud Fundamentals Certification

## ACTIVITIES

Quantitative Investment Society, Medlaunch