Johann Tsegay

johannt@umich.edu • 703-362-0725 • Ann Arbor, MI •U.S. Citizen

EDUCATION

University of Michigan, College of Engineering — **Ann Arbor, MI**

BS in Computer Science, Minor in Business, ***GPA 3.73/4.0*** — *Expected Graduation: May 2025*

Coursework: Data Structures and Algorithms, Discrete Math, Linear Algebra, Calculus 3, Web Design & Accessibility

Honors: Dean's List (2022 - present), University Honors (2023)

Extra-curriculars: **ColorStack**, Atlas Digital Consulting, LEAD Scholars, UM Autonomy

SKILLS

Languages: C++, Python, Javascript, SQL, CSS, HTML, Java, MATLAB, German (working proficiency)
Technologies: React, Git, VSCode, Jupyter, PyTorch

EXPERIENCE

Ultima Insights — **Ann Arbor, MI**

Software Analyst — *August 2022 - December 2022*

- Engineered a website utilizing React.js, Tailwind CSS, and Figma to improve front-end maneuverability and accessibility.
- Designed and integrated a dynamic filtering system for stock ticker related articles to display top matches from an API
- Restructured existing framework to add back-end functionality of hedging forecast and private investment tools.

Academy of Engineering and Technology Research — **Ann Arbor, MI**

Senior Student Researcher — *August 2022 - December 2022*

- Conducted research on LSTM prediction models and created/articulated bi-directional model to predict cryptocurrency price fluctuations.
- Assissted junior researchers by providing sprint planning templates, scholarly article search parameters, and research notebook peer review sessions

Atlas Digital Consulting — **Ann Arbor, MI**

Project Manager — *August 2023 - Present*

- Managed and worked alongside a team of five software analysts to integrate an application platform into an existing website to streamline recruitment
- Conducted weekly meetings between analyst team and clients to ensure 100% of deliverable deadlines were met
- Applied Scrum framework to facilitate sprint scheduling, group discussion, and code revision

Junior Java — **Leesburg, VA**

Founder — *March 2019 - January 2023*

- Founded a 501c3 tutoring organization with over 480 students with a teaching staff of high school computer science students geared towards training under resourced K-10th grade children programming fundamentals.
- Taught students fundamentals of Java OOP + Graphics and Python through a two week-long summer course; held remote and in-person venues over the span of a month annually.

PROJECTS

Deep Learning Cryptocurrency Prediction Model | *Python, Pandas, vaderSentiment* — *May 2022*

- Utilized big data accumulated from social platforms & Coinbase API to predict Bitcoin price fluctuations 48hr in advance
- Developed model in Jupyter Notebook utilizing Pandas and Vader NLP libraries to generate three years of training & test
- Implemented a Bi-Directional LSTM model to cut percent error to sub 1% utilizing look-back window approach.

FitCheck | *React.js, JavaScript, Node.js, TailwindCSS* — *January 2023*

- Engineered and designed a social media app designed for users to post outfits/clothings with an option to rent in React.js
- Integrated Docker swipe library to produce like/dislike functionality for outfits viewed to train user's interests using Gale-Shapley algorithm
- Employed MongoDB and Node.JS to facilitate POST requests from local server and keep outfits on user feed up-to-date.

Piazza Post Classifier | *C++* — *April 2023*

- Implemented a Bayes classifier to categorize posts from staff on Piazza, a forum for class intercommunication
- Rewrote the STL version of <Map.h> into a more optimized version for large data regression models