Andrew Wang

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Education

University of Michigan – Ann Arbor Graduation Date: May 2026

B.S. in Computer Science + Bachelor of Business Administration *GPA: 3.88/4.00*

- **Coursework:** Data Structures and Algorithms, Web Systems, Computer Organization, Discrete Math, Foundations of Computer Science, Business Analytics and Statistics, Linear Algebra, Machine Learning (W25), Computer Vision (W25)
- **Organizations:** Alternative Investments Club (Desk Head), Michigan Student AI Lab, Michigan Data Science Team

Experience

ESI Group Farmington Hills, MI

AI/ML Intern Jul 2024 – Aug 2024

- Designed reinforcement learning models in Python using PyTorch, Stable Baselines 3, and Gymnasium, creating a custom environment to interface with ESI's vibroacoustic simulation software VA One, implementing proximal policy optimization to minimize sound pressure levels in vehicle cabins by altering noise control treatment on 3D models
- Wrote a library of 20+ scripts using Pandas, PySide2, and VA One's Python API to automate the creation of materials and noise control treatments, export simulation results to Excel, and adjust model properties based on user input

1 Plus 1 Ventures Chicago, IL

Software Engineer Intern Feb 2024 – Jun 2024

- Built a full-stack project management and legal compliance web application, using React for front-end and Firebase for back-end, employing Google Maps API and ArcGIS to provide relevant regulatory information based on geography
- Implemented user authentication and CRUD functionality in Firestore's document database, enabling users to create, read, update, and delete projects, querying for legal documents and governing agencies based on project attributes

Rocket Central Detroit, MI

Systems Engineer Intern May 2023 – Aug 2023

- Created a JavaScript program using ServiceNow's Configuration Management Database API to automate the remediation of 3600+ duplicate parent-child relationships within the ServiceNow CMDB, reducing data inaccuracy metrics by 60%
- Produced Microsoft Excel reports to monitor MID Server activity and wrote internal documentation detailing the server-decommission process, assuming the responsibilities of a senior business analyst on a two-week leave of absence

Projects

Instagram Clone Fall 2024

- Built an Instagram-like web app using React for front-end and Flask for back-end, leveraging a MySQL database to handle post creation, account management, and user authentication, deploying the app on AWS EC2 for live testing
- Integrated REST API endpoints for creating client-side dynamic pages and updating likes, comments, and followers in real-time, with session-based access control to restrict actions to authorized users, ensuring secure data modification

MapReduce Framework Fall 2024

- Engineered a distributed MapReduce framework in Python, using multithreading for parallel task execution, JSON for message handling, and sockets for manager-worker communication, deployed on AWS EMR for large-scale data tasks
- Designed fault tolerance using Python threads, UDP for heartbeat monitoring and failure recovery, TCP for efficient task distribution, and UNIX tools to partition intermediate data files, ensuring reliable execution of jobs across a cluster

Sneaker Ecommerce App Summer 2024

- Developed a basketball shoe storefront for iOS and Android, using Flutter and Express to implement scrolling product carousels, category filtering, page navigation, and a complete shopping cart system with Provider for state management
- Constructed a fully functional checkout process by integrating Stripe for secure payment processing, utilizing Express back-end to facilitate real-time payment validation, manage discount codes, and ensure seamless interaction with Flutter

Additional

- **Technologies:** C++, C, Python, HTML/CSS/JavaScript, Java, SQL, Express, React, Flutter, AWS, PyTorch, Figma
- **Interests:** Freshwater Fishing Enthusiast, Tennis and Pickleball Player, Poker Novice, Top 200 in Pokemon Showdown