Andrew Wang

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EDUCATION

University of Maryland, College Park, MD
Bachelor of Science in Computer Science, Minor in Statistics   *Expected May 2026*
GPA: 4.0/4.0
Relevant Coursework: Design and Analysis of Computer Algorithms, Introduction to Data Science, Machine Learning, Database Design, Probability Theory, Theory and Methods of Statistics, Operating Systems

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, Java, C, SQL, Matlab, OCaml, x86 assembly
Database Technologies: PostgreSQL, MongoDB
Web Development: Node.js, Express.js, React.js, Django, HTML, CSS
Data Science and Machine Learning: Pytorch, LangChain, NumPy, pandas, scikit-learn, Matplotlib
Cloud and Containerization: Docker, AWS EC2
Software Engineering: Database Design, Data Structures and Algorithm Design, Operating Systems Programming

PROJECTS

UMIACS Wiki Chatbot | *Developer*   *August 2024 - Current*
Working in a six-person team to convert the University of Maryland Institute for Advanced Computer Studies (UMIACS) Wiki into a chatbot, automating responses to frequent support tickets.
- Scrape and parse wiki content using Beautiful Soup into structured data formats for accurate processing and model training.
- Employ two different approaches: retrieval-augmented generation (using LangChain) and fine-tuning.
- Develop evaluation metrics to measure the chatbot's response accuracy.

Doodles and Character Classifier | *Full-Stack Developer and Owner*   *July 2024 - August 2024*
Developed a web application using React and Node.js that enables users to classify their images in real-time as they draw, with the option of running the models directly in the browser or on a server.
- Trained models using PyTorch on Quick, Draw! (doodles) and EMNIST (letters/digits) datasets.
- Live Demo: http://imageclassifier.andrewtheterp.com

Zulip | *Open Source Contributor*   *March 2024 - May 2024*
Zulip (https://zulip.com/) is an open-source team collaboration tool combining chat and email to support live and asynchronous conversations. Collaborated with maintainers on 10+ pull requests, including bug fixes and full-stack implementations using Python and JavaScript to enhance functionality.
- Developed a feature to enable attachment deletion when removed from messages.
- Implemented logic to prevent duplicate emails, enhancing the platform's email reliability and user experience.
- Pull requests: https://github.com/zulip/zulip/pulls/wandrew0

MoneyWatcher | *Full-Stack Developer and Owner*   *December 2023 - January 2024*
Built a personal finance management web application. Key features include custom spending reports, budget rules, and automated alerts.
- Integrated Plaid API to track users' bank transactions. Utilized MongoDB for the database and implemented the backend server using Node.js and Express.js. Designed and developed the MoneyWatcher REST API.
- Live Demo: http://moneywatcher.andrewtheterp.com

EXPERIENCES

Teaching Assistant   *September 2023 - May 2024*
Computer Science Department, University of Maryland
- Supported CMSC216 (Introduction to Computer Systems) and CMSC132 (Object-Oriented Programming) courses by leading office hours and assisting 100+ students with assignments and course material.
- Graded assignments and proctored exams

Undergraduate Student Researcher   *August 2022 - May 2023*
First-Year Innovation and Research Experience (FIRE), University of Maryland
- Developed Python and PyMOL scripts to visualize and analyze DNA-protein interactions as part of Genome Computing research.