

Andrew Ma

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EDUCATION

Harvard University

Master of Science, Computational Science and Engineering

Cambridge, MA

Expected: August 2025 - May 2026

University of Virginia

B.S. Computer Science, 4.0 GPA

Charlottesville, VA

Expected Graduation: May 2025

- **Relevant Courses:** Data Structures and Algorithms, Machine Learning, Probability, Linear Algebra, Computer Systems Organization, Software Development, Natural Language Processing, Discrete Math

EXPERIENCE

Jane Street

Incoming Software Engineering Intern

New York, NY

May 2025 – Aug 2025

NimbleRx

Software Engineering Intern

Redwood City, CA

June 2024 – Aug 2024

- Developed and maintained endpoints and services for Java SpringBoot backend server
- Integrated external API endpoint for pharmacy system signature submissions, resulting in streamlined signature submission for 3000+ patients across 34 pharmacies
- Designed and implemented the surfacing of specific error messages for payment declines/failure, addressing 17% in lost GMV caused by abandoned orders
- Wrote backward-compatible schema migrations for Liquibase PostgreSQL database, ensuring seamless integration and system stability

Floodwatch | floodwatch.io

Undergraduate Researcher, ML Team Lead

Charlottesville, VA

Apr 2023 – Present

- Published original manuscript, “Sensor Corroboration Enhances Anomaly Detection in Flood Forecasting Systems,” as first author in the MDPI Journal of Sensor and Actuator Networks
 - Engineered a novel deep learning based anomaly detection system for validation of live sensor data streams, improving performance by 10.8% compared to state of the art
- Designed and implemented Python cron job to automatically produce and update flood forecasts for the user-facing application, ensuring real-time flood risk information for 10,000+ regions in Vietnam
- Led and mentored team of 6 undergraduate researchers to complete ML projects

UVA Biocomplexity Institute and Initiative

Research Intern

Charlottesville, VA

May 2023 – Jul 2023

- Built and implemented an end-to-end machine learning pipeline to detect irrigation canals in remote sensing imagery, resulting in a 0.77 F1-Score for the ResUNet model
- Generated 124,000km² of ground truth images by georeferencing 2851 waterways in 29 satellite images, resulting in 124GB of processed data used for model training, testing, and validation
- Developed a visualization tool in Python that uses GIS to overlay waterways and orchards on satellite imagery, enhancing the ability to interpret, verify, and analyze segmentation model outputs

UVA Engineering School

Teaching Assistant

Charlottesville, VA

Jan 2024 – Present

- TA for Computer Systems and Organization 2 (computer architecture, operating systems, C, networks)

PROJECTS

HoosHungry | [GitHub](https://github.com)

Sep 2023 – Dec 2023

- Developed full-stack Python Django website with HTML, CSS, and Bootstrap frontend that enables UVA students to review and share restaurant or dining hall locations at the University of Virginia

SKILLS

Languages: Python, Java, SQL, C, C++, C#, JavaScript, HTML/CSS

Technologies: Spring, Django, Keras, TensorFlow, Scikit-learn, NumPy, React, Android Studio, Unity

Other: AWS, Git, Linux, Retool, Heroku, Jupyter Notebook