Ava Hajratwala

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Education

Barnard College, Columbia University — New York, NY
Bachelor of Arts in Computer Science — *Sept. 2021 – Dec. 2024*
Selected courses: Design for Generative AI, Entrepreneurship, NLP — **GPA: 3.8/4.0**

Skills

Languages: Python, Java, JavaScript/TypeScript, C, C++, C#, SQL (MySQL), HTML, CSS, Haskell
Frameworks: React, Node.js, Flask, JUnit
Developer Tools: Git, Docker, VS Code, Postman, PyCharm, IntelliJ
Libraries: NumPy, OpenCV, pandas, Matplotlib, WebAudio

Experience

Full-stack Developer — Sept. 2024 – Present
WBAR Radio — *New York, NY*
- Designed a relational database to store information about radio shows
- Developed a REST API in Node.js for accessing the database using MySQL
- Translated design wireframes into React components
- Implemented login system to secure website data

Undergraduate AI Research Lead — May 2024 – Present
Soros Lab, Barnard College — *New York, NY*
- Secured a $6,000 grant to work on a team developing novel genetic algorithms in Python
- Cut approx. 10 hours per week of test runtime by parallelizing experiment trials
- Promoted to team lead in 3 months for strong initiative, organization, and communication skills
- Taught 3 teammates to use Git and GitHub for version control and branch management
- Presented findings in a poster presentation to more than 50 academics and industry leaders
- Currently writing a technical paper to submit to the GECCO conference in January 2025

Computer Science Tutor — Sept. 2023 – Present
Vagelos Computational Science Center, Barnard College — *New York, NY*
- Taught more than 100 students CS fundamentals including object-oriented programming and debugging
- Assisted students in completing assignments in Java, JavaScript, Python, and C
- Honed software communication skills to quickly identify software bugs and coach students on how to fix them

Projects

Privacy Policy Helper | *Python, Flask, React, Git* — Sept. 2024 – Present
- Built a full-stack web app to help users evaluate privacy tradeoffs using OpenAI's chat API
- Conducted testing on 10 users to refine technical prototype
- Built a webscraper including the Google Search API to retrieve a privacy policy by company name
- Processed GPT output using fuzzy search to cite sources in the model's response

Pour Decisions | *Flask, Figma, React* — Jan. – May 2024
- Led frontend development of a Flask app to teach college students wine and food pairings in under 10 minutes
- Collaborated with design team to transform designs into a responsive, user-friendly interface
- Conducted 15 user interviews to gather feedback on prototypes, leading to UI improvements that boosted engagement

Flight Simulator | *C++, Fusion360, Serial, Arduino, Unity* — Apr. – May 2024
- Developed a custom USB-C communication protocol between an ESP32 and the Unity game engine for controlling a virtual plane
- Processed analog sensor inputs in real-time to control the plane smoothly
- Rendered flight real-time flight statistics to the ESP32 screen using a low-level graphics library
- Designed and machined a custom enclosure for the electronics