

Ava “Ellie” Burton

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EDUCATION

Bachelor of Science in Computer Science, Data Science @ The University of Alabama May 2026

GPA: 3.827/4.0

Minors: Mathematics, Randall Research Scholars Program

Central Magnet School | Murfreesboro, TN May 2022

Graduated: Valedictorian, with Honors and Distinction, with AP Capstone Diploma

- National Merit Scholar, 36 ACT

SKILLS

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

Development Tools & Version Control: Eclipse, GitHub, Bitbucket, UML, Vim

Data Analysis & Visualization: Natural Language Processing, Recommender Systems, Matplotlib, Predictive Modeling, Web Scraping

RESEARCH

The University of Alabama Institute of Data Analytics August 2023 - Present

- Working on the Sex Trafficking Analytics for Network Detection and Disruption (STANDDD) initiative; developing computational methods to optimize accuracy of detection; ID and contact of > 50 potential sex trafficking victims

The University of Alabama Department of Economics, Finance, and Legal Studies February 2024 - Present

- Software development of an experimental simulation web app; tested income uncertainty's effect on charitable giving; full stack application with Google Sheets API integration for free data storage and GitHub pages for free deployment.

PERSONAL PROJECTS

Personal website: ellie-burton.github.io March 2024

- Developed and hosted a personal website using GitHub Pages, showcasing a portfolio of personal projects and academic achievements. The site also features sections on personal interests, including book reviews and craft projects.

PlaylistPainter May 2024

- Developed a web app that uses AI to generate album covers from Spotify playlists. Built with Spotify API integration, Flask, Bootstrap, Hugging Face, and Pillow.

NFC Lifestyle Automations Dec 2023

- Created innovative automations using NFC tags, Python, OpenAI API, and Google Photos API. Developed solutions to start smart home routines, track habits, improve gratitude, and send automated weekly emails.

LEADERSHIP

UA Association of Computing Machinery (ACM) - Women | President August 2023 - Present

- Restarted and officially certified the club, as well as increased membership from 4 to 25. I strive to create spaces where everyone feels valued, fostering teamwork and encouraging individual growth.

AWARDS

RRSP 2024 Most Impactful Research Project April 2024

ACM Outstanding Student Leader April 2024

WORK EXPERIENCE

Mathnasium of Murfreesboro | Instructor July 2021 -Present

- Tutor students ages 6-18 in all levels of mathematics using Socratic methods; maintain an encouraging, clean, and focused learning environment; manage grading worksheets and keep papers organized.
- Transitioned to provide remote, online math tutoring in August 2022