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
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, Git, UML, Vim, Google Cloud Console, Agile Development
Data Analysis & AI/ML: Natural Language Processing, Predictive Modeling, Matplotlib, Web Scraping, API Integration, PyTorch, Scikit-learn, TensorFlow, Model Fine-Tuning

RESEARCH

The University of Alabama Institute of Data and Analytics Aug 2023 - Present
- Developed computational methods for the Sex Trafficking Analytics for Network Detection and Disruption (STANDD) initiative.
- Identified and facilitated contact with over 50 potential victims through advanced machine learning techniques.

The University of Alabama Department of Economics, Finance, and Legal Studies Feb 2024 - Present
- Designed and deployed a full-stack experimental simulation web app to study income uncertainty's effect on charitable giving.
- Integrated Google Sheets API for free data storage and GitHub pages for deployment.

PERSONAL PROJECTS

Personal website: ellie-burton.github.io March 2024
- Developed a personal portfolio website using GitHub Pages, featuring projects and academic achievements.

Developed a custom BERT-based sentence transformer June - Aug 2024
- Enhanced a pre-trained language model by refining performance with a triplet loss approach, improving contextual accuracy for specialized tasks.
- Conducted experiments, managed model checkpoints, and evaluated model efficacy against baseline performance.

PlaylistPainter May 2024
- Created a web app using AI to generate album covers from Spotify playlists, integrating Spotify API, Flask, Bootstrap, Hugging Face, and Pillow.

(view more on ellie-burton.github.io)

LEADERSHIP

UA Association of Computing Machinery (ACM) - Women | President Aug 2023 - Present
- Revitalized the ACM-W chapter, growing membership from 4 to 45+.
- Organize workshops and networking events to foster an inclusive community.
- Reinstated the club as an official chapter of the national organization

AWARDS

RRSP 2024 Most Impactful Research Project April 2024
ACM Outstanding Student Leader April 2024