

Ava "Ellie" Burton

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EDUCATION

Bachelor of Science in Computer Science, The University of Alabama Tuscaloosa, AL	May 2026
GPA: 3.999/4.0	
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 and Development:

Python, C, C++, C#, R, HTML, CSS, JavaScript, Java, SQL

Software Development Tools and Version Control:

Eclipse, GitHub, Bitbucket, UML, Vim

Data Analysis and Visualization:

Natural Language Processing, Recommender Systems, Matplotlib, Predictive Modeling, Web Scraping

RESEARCH

The University of Alabama Institute of Data Analytics	August 2023 - Present
<ul style="list-style-type: none">Working on the Sex Trafficking Analytics for Network Detection and Disruption initiative; developing computational methods to optimize accuracy of detection; ID and contact of > 50 potential sex trafficking victims	
AP Capstone/ Central Magnet Thesis Focus	July 2021 - May 2022
<ul style="list-style-type: none">Researched the effect of Elementary school math contests on mathematical self-efficacy by implementing an Elementary math contest program in Rutherford County	
Middle Tennessee State University	June 2021 - August 2021
<ul style="list-style-type: none">Research in the field of Topological Graph Theory under Dr. Chris Stephens, head of the Department of Mathematical Sciences at MTSU; focuses on the Cycle Double Cover Conjecture	

LEADERSHIP

UA Association of Computing Machinery (ACM) - Women President	August 2023 - Present
UA Joy Project Media Chair	August 2023 - Present

SERVICE WORK

The University of Alabama Honors Action	August 2022
<ul style="list-style-type: none">Painted murals in Tuscaloosa County schools and assisted with other projects to revitalize campuses	
Summer ImpACT Program	June 2021 - August 2021
Rutherford County Summer School ACT Coach	
<ul style="list-style-type: none">Tutored 16 students on the English, Reading, and Science sections of the ACT; enabled students to achieve up to 17-point increases	
Review for Relief	July 2020 - March 2021
Student-led Non-profit Social Media Manager and Content Creator	
<ul style="list-style-type: none">Directed a team of content creators; reached over 800k views on social mediaProduced resources including ACT and AP exam materials; helped raise over \$5.6k for COVID-19 relief	

WORK EXPERIENCE

Mathnasium of Murfreesboro Instructor	July 2021 -Present
<ul style="list-style-type: none">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	