

Liam Tucker

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EDUCATION

The University of Alabama – Tuscaloosa, AL | Honors College

GPA: 4.0/4.0

Master of Science in Computer Science

May 2025

Bachelor of Science in Computer Science

May 2025

Minors – Randall Research Scholars Program, Math

EXPERIENCE

Undergraduate Researcher – The University of Alabama

September 2023 - Present

Digital Forensics and Control Systems Security Lab – Tuscaloosa, AL

- Trained ML Neural Networks to identify and classify traffic lights with 88% accuracy up to 100 meters
- Designed automated system for constructing database of roadside assets using LiDAR and images

Summer Intern – ProcDNA

May 2023 – August 2023

SlideSage Project – Chicago, IL

- Developed SlideSage, a ChatGPT-powered program to facilitate Q&A with user's PowerPoint files
- Integrated NLP tools (BioBERT) to parse and identify most relevant information for any text query
- Created webapp UI using Django, HTML, CSS, and Javascript

Undergraduate Researcher – The University of Alabama

August 2022 – May 2023

Lab for Computational Imaging and Smart Structures (CISS) – Tuscaloosa, AL

- Developed framework for USCT data with 20% faster access and 50% smaller storage requirements
- Implemented new loss functions to enhance clarity of ultrasound computed tomography images
- Parallelized existing MATLAB scripts for USCT data generation for use on cluster

REU Researcher – Stony Brook University

June 2022 – August 2022

Data + Computing = Discovery! Program – Stony Brook, NY

- Created Python scripts accessing and processing Twitter user data using REST API and SQL Database
- Performed statistical tests and visualized characteristics of 10+ million Twitter users with pronoun lists

PUBLICATIONS AND CONFERENCES

- Tucker, L., He, J. Developing a Flexible Data Format for Ultrasound Waveform Data. Thematic Poster Presentation. Role: Presenting Author. The University of Alabama, Undergraduate Research and Creative Activity Conference, Tuscaloosa, AL, 2023.
- Tucker, L., & Jones, J. (2023). Pronoun Lists in Profile Bios Display Increased Prevalence, Systematic Copresence with Other Keywords and Network Tie Clustering among US Twitter Users 2015-2022. *Journal of Quantitative Description: Digital Media*, 3. <https://doi.org/10.51685/jqd.2023.003>

SKILLS AND LANGUAGES

Languages – Python, C++, Linux, Unix, Git, SQL, Matlab, Java, Javascript, CSS, Node.js, HTML, C, FORTRAN, *Skills and Technologies* – Machine Learning (ML), Artificial Intelligence (AI), Computer Vision (CV), TensorFlow, NumPy, sklearn, Natural Language Processing (NLP), Parallel Computing, Data Structures and Algorithms, Django

SELECT ACTIVITIES

Vote Everywhere – Member (2022 – present), Ambassador (2023 – 2024)

Competitive Programming Team – Member (2021 – present)

UA Association for Computing Machinery – Member (2021 – present), Secretary (2023)

Mathtastic – Volunteer Tutor (2021)

Boy Scouts – Eagle Scout Award (October 2018)