Vedu Mallela

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SUMMARY

- Aspiring Computer Scientist from Georgia Tech seeking to build on my broad research experience — combining machine learning, artificial intelligence, and data visualization concepts to tackle challenging problems with innovative, scalable solutions.

EDUCATION

Georgia Institute of Technology   Atlanta, GA
Bachelor of Science, Computer Science   *Expected May 2025*
- GPA: 3.42, Major GPA: 3.64
- Intelligence and Media Threads
- Relevant Coursework: Data Structures and Algorithms, Design and Analysis of Algorithms, Computer Graphics, Artificial Intelligence, Automated Algorithm Design, Information Visualization
- Extracurricular Activities: Lambda Chi Alpha Fraternity (Founding Father), Georgia Tech Wreck Racing, AI + Medicine Society

EXPERIENCE

Student Researcher   09/2022 - Present
College of Computing, Georgia Institute of Technology   *Atlanta, GA*
- Developed a resource scheduler application which interfaces with Slurm Workload Manager and Google APIs to manage access to researchers working with shared supercomputer resources.
- Co-authored a paper titled "Multifaceted Approaches for Introducing a Hardware-Thread Migratory Architecture" in the SEHET 2023 ACM workshop. The paper details innovative and novel usage of Sheets APIs to translate SLURM resource allocation across scalable infrastructure.

Software Engineering Intern   05/2023 - 08/2023
2MNEXT   *Atlanta, GA*
- Identified project management inefficiencies at construction sites across the Southeast and implemented a project portal to efficiently track projects, significantly benefiting operations at 3 major airports.
- Designed an employee portal using React and Firebase, providing employees with easy access to company resources and human resources tools, improving team communication and productivity by increasing internal transparency.

Research Intern   08/2020 - 12/2022
MIT Computer Science and Artificial Intelligence Laboratory   *Cambridge, MA*
- Engineered computer vision segmentation models, aiding 3,000+ neuroscientists in clinical and wet lab research.
- Developed a 3D brain visualization software tailored for rendering clinical biomarker data, providing valuable insights to neuroscientists and helping them communicate results.
- Utilized the Blender Graphics API and Harvard Freesurfer to create a novel 3D mouse brain visualization tool, resulting in a published work and offering a pivotal resource for the neuroscience community.

Visiting Undergraduate Research Intern   04/2021 - 08/2022
Harvard John A. Paulson School of Engineering and Applied Sciences   *Cambridge, MA*
- Developed tree visualization tools for in-vitro fertilization datasets, implemented k-means clustering and edit distance metrics to build a visualization dashboard for clinical researchers.
- Spearheaded the development of a web application for gathering and visualizing high volumes of data, reducing time to examine samples by 50% and a 20% improvement in the quality of data obtained for analysis.

Research Intern   05/2020 - 03/2021
Stanford University Compression Forum   *Stanford, CA*
- Developed novel NLP algorithms for a COVID-19 news aggregator built with Flask and PyTorch.
- Partnered with Stanford Journalism to provide enhanced regional pandemic updates to localities worldwide.

TECHNICAL SKILLS

Languages: Python, JavaScript, Java, HTML, CSS, C++, C, LaTeX
Frameworks: Flask, Angular, React, BootStrap, MongoDB, D3.js, GraphQL
Developer Tools: Git, Anaconda, Docker, Firebase, Jupyter, Figma, Postman, JUnit, SLURM
Libraries: Numpy, Scikit-Learn, PyTorch, Blender, Node.js, Piling.js, Pandas, OpenCV, Matplotlib, OpenGL