

Vedavyas (Vedu) Mallela

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EDUCATION

Georgia Institute of Technology

Atlanta, GA

Bachelor of Science, Computer Science

December 2024

- Artificial Intelligence and Computer Graphics Concentration
- Relevant Coursework: Artificial Intelligence, Computer Vision, Data Structures and Algorithms, Design and Analysis of Algorithms, Computer Graphics, Game AI, Robotics and Perception
- Extracurricular Activities: GreyHat Cybersecurity Club, Georgia Tech Wreck Racing, AI + Medicine Society

EXPERIENCE

Research Assistant

09/2022 - 12/2024

College of Computing, Georgia Institute of Technology

Atlanta, GA

- Designed and implemented a resource scheduler for supercomputing infrastructure using Google APIs and SLURM, reducing unnecessary uptime by 30% and simplifying the process for non technical researchers.
- Published findings at SEHET ACM 2023, contributing to advancements in AI hardware acceleration for RISC-V.

Software Engineering Intern

05/2024 - 08/2024

TikTok

San Jose, CA

- Led the consolidation of a large-scale causal inference codebase, optimizing performance and reducing technical debt by 50%. Enabled more efficient experimentation with 5k+ daily experiments.
- Developed and owned a risk assessment module for the experimentation platform, reducing risk detection time by 35% and increasing decision-making accuracy for cross-functional teams.
- Implemented advanced backdoor control techniques to mitigate confounding variables in A/B tests, enhancing model robustness and reducing false positives by 25%.

Research Intern

08/2020 - 12/2022

MIT Computer Science and Artificial Intelligence Laboratory

Cambridge, MA

- Engineered computer vision segmentation models, aiding 5,000+ neuroscientists in clinical and wet lab research.
- Published a 3D brain visualization software tailored for rendering clinical biomarker data, providing valuable insights to neuroscientists and helping them communicate results.

Visiting Undergraduate Research Intern

04/2021 - 08/2022

Harvard John A. Paulson School of Engineering and Applied Sciences

Cambridge, MA

- Developed tree visualization software for in-vitro fertilization datasets, implemented k-means clustering and tree edit distance metrics to build a visualization dashboard for clinical researchers.
- Developed a web application using d3.js for gathering and visualizing high volume medical datasets.

Research Intern

05/2020 - 03/2021

Stanford University Compression Forum

Stanford, CA

- Developed a sentiment analysis NLP for a COVID-19 news aggregator using Flask and PyTorch, providing enhanced regional pandemic updates.
- Integrated with Stanford Journalism's Big Local Data initiative to enhance updates to localities worldwide.

PROJECTS

EMADE | *PyTorch, Numpy, Keras*

August 2023 – Present

- The Evolutionary Multi-objective Algorithm Design Engine is a software for developing multi objective genetic algorithms to solve complex problems.
- Adding transfer learning primitives to allow algorithms to solve a wide array of problems.
- Working with self driving motion and video datasets to run object detection models using evolutionary algorithms.

TECHNICAL SKILLS

Languages: Python, JavaScript, Java, C#, C++, C

Frameworks: Flask, Unity, 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, Pandas, OpenCV, Matplotlib, OpenGL