Sahit Kadthala

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EDUCATION

University of Maryland *Combined BS/MS in Computer Science* | College Park, MD   **GPA**: **4.0 / 4.0**
- **M.S. in Computer Science**   **May 2025**
  - **Coursework:** Natural Language Processing, Database System Architecture, Computer and Network Security
- **B.S. in Computer Science with Minor in Cybersecurity**   **May 2024**
  - **Latin Honors:** Magna Cum Laude | Honors College Graduate
  - **Coursework**: Advanced Data Structures, Algorithms, Design of Computer Algorithms, Artificial Intelligence, Machine Learning, Data Science, Computer Systems, Object Oriented Programming II

EXPERIENCE

Computer Science Researcher - **UMD Human Data Interaction Group**, College Park, MD   Aug 2022 - Present
- Created a Python script to autonomously generate thousands of diverse synthetic datasets based on the structure of a user-provided dataset to utilize in machine learning model training
- Programmed WebGL renderer using Three.js and Node.js to render SVGs 25% faster with enhanced clarity
- Built an infographic generator tool that leverages LLMs to convert a user's text story into an infographic

Machine Learning Software Engineer Intern - **CrowdStrike**, Remote   May 2024 - Aug 2024
- Learned feature engineering by using Rust to parse raw byte data from signing certificates and extract valuable information to be turned into features for machine learning models
- Bridged the gap between Rust and Python codebases by developing Python scripts that allow the Machine Learning SWE team to pull features from their Rust codebase to use in their Python machine learning code
- Produced 5 examples using Python showcasing the use of the new features in machine learning models

Teaching Assistant for Computer Systems - **UMD Computer Science**, College Park, MD   Jan 2023 - Dec 2023
- Taught C programming and assembly language concepts and how they apply to computer systems
- Led two discussion sections for 75 students and office hours to provide 1-on-1 help for 1000+ students

Software Engineering Intern - **Textron Systems**, Hunt Valley, MD   May 2023 - Aug 2023
- Engineered a tool for Systems Engineers to maintain a set of 10,000 faults for the Navy's unmanned boats
- Designed a user interface to display fault data and programmatically create CSV exports and header files
- Connected a MySQL database containing the fault data to the user interface developed in C++ and QT
- Gained experience with Atlassian Collaboration tools like Jira and Confluence, the entire Software Development lifecycle, hosting on Artifactory, and working in an Agile environment

Software Engineering Intern - **US Army Research Laboratory**, Adelphi, MD   May 2022 - Sep 2022
- Developed a user interface that serves as a real-time power monitoring system for soldiers by collecting and visualizing electric power data from ground sensors
- Automated an email system that sends reports of recently collected data when sensor alerts are triggered
- Submitted a presentation and abstract for publishing by the US Army Research Technical Library

RESEARCH PROJECTS

Quiz Bowl: Creating a Better Question Answering (QA) System - Constructed an effective QA system for answering Quiz Bowl questions using the DPR and ColbertV2 information retrieval models and the ChatQA LLM.

Adversarial Examples for AI Models - Developed an adversarial example generator that exploits prompting vulnerabilities in open-source AI models to cause them to output dangerous or incorrect results for testing purposes.

Are LLMs Reliable for Qualitative Coding in Security? - Structured a codebook for categorizing tweets and assessed various LLMs' accuracy in applying the codebook to both labeled and unlabeled data.

Using Machine Learning in the NBA - Completed the data science lifecycle and trained several machine learning models on 40 years of NBA regular season data to predict the winner of the 2023 NBA Finals.

SKILLS

Languages: Java, Python, C, C++, Rust, JavaScript, SQL, Racket, OCaml, Ruby, R, HTML/CSS, MATLAB
Technologies: Docker, PostgreSQL, MySQL, MongoDB, Node.js, Bitbucket, Mercurial, Linux/Unix, MacOS

AWARDS

President's Merit Scholarship - University of Maryland   Aug 2021 - May 2025
Computer Science Dean's List - University of Maryland   Aug 2021 - May 2024