SAHANA GANAPATHY

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EDUCATION

The University of Texas at Austin, Austin, TX   **August 2022 - May 2026**

Bachelor of Science, Computer Science — GPA: 3.75

Relevant Coursework: Data Structures and Algorithms, Statistics and Data Science, Operating Systems, Linear Algebra, Software Engineering, Generative Visual Computing, Computer Architecture, Network Security and Privacy, Algorithms and Complexity

EXPERIENCE

WELLS FARGO, Addison, TX   **June 2025 - Present**

Software Engineering Intern

- Utilized agentic AI frameworks such as Langchain, CrewAI, Microsoft Autogen, and Google ADK to implement a company documentation chatbot for internal use
- Engineered a Retrieval-Augmented Generation (RAG) pipeline using Langchain, Google Cloud Datastore, and Vertex AI, enabling and embedding, and chunking of extensive documentation via RESTful APIs
- Deployed and managed software on cloud environments such as Azure Kubernetes Service and Google Cloud
- Streamlined CI/CD workflows with Terraform and Ansible

UT AUSTIN INFORMATION SECURITY OFFICE, Austin, TX   **April 2025 - Present**

Student Technician

- Hands-on experience exploiting over 50 HackTheBox labs, mainly focused on web applications, networks, Active Directory, and Windows and Linux operating system internals
- Trained in SIEM tools like Splunk and Elastic for threat detection and incident handling
- HTB Certified Defense Analyst (in progress) & SOC Analyst (in training)

UNITED FEDERAL CREDIT UNION (UFCU), Austin, TX   **June 2024 - August 2024**

App Developer Intern

- Worked with the Information Technology department to develop, test, and maintain secure banking applications
- Developed a web application to automate customer form intake, utilizing JavaScript, Django, DevOps and Microsoft SQL
- Integrated DocuSign API to digitize and streamline signature collection

PROJECTS

- **MEMORY SANDBOXING**: Refactored C++ application to use RLBox sandboxing, preventing buffer overflow attacks.
- **CLOUD SCHEDULING:** Simulated L2 cache behavior using Dinero IV in C to analyze memory access patterns; used a Recurrent Neural Network and Monte Carlo error injection to evaluate energy consumption
- **GPONGT:** Leveraged real-time LLM code generation to create a dynamically evolving pong game
- **ECLIPSE-JKUBE OPEN SOURCE CONTRIBUTOR:** Identified and resolved unused code in the Java codebase, improving application performance

LEADERSHIP & COMMUNITY INVOLVEMENT

ECLAIR AI AND ROBOTICS, Austin, TX   **January 2023 - Present**

Engineering Lead

- Managed and led a team of over 20 engineers focused on integrating autonomous driving algorithms into a raspberry pi utilizing neuro-evolution
- Fine-tuned a language model (Distil GPT) to identify emotions in song lyrics using Numpy and TensorFlow

DEPARTMENT OF COMPUTER SCIENCE, UNIVERSITY OF TEXAS AT AUSTIN, Austin, TX   **January 2024 - Present**

Undergraduate Research Assistant

- Performed research alongside Dr. Shravan Narayan on extending a compiler to include memory sandboxing capabilities
- Worked with Dr. Venkat Arun on utilizing neural networks to improve network congestion control algorithms

HASH ASSOCIATION OF STUDENT HACKERS, Austin, TX   **January 2024 - Present**

Team Member / Represents UT internationally at collegiate level cybersecurity competitions

- Placed 5th nationally in the 2025 National Collegiate Cyber Defense Competition
- Configured ESXi server for virtualization, managing multiple VMs and OS environments
- Configured containers on a Proxmox server, using VLANs and virtual NICs for network segmentation and isolation.

INFORMATION & SYSTEMS SECURITY SOCIETY, Austin, TX   **January 2023 - September 2024**

Logistics Director

- Organized technical talks, Capture The Flag (CTF) competitions, and other cybersecurity related events for 100+ attendees
- Oversaw financial operations and strategically allocated organization budgets

HONORS AND AWARDS

- **Best AI Hack, HackTX 2024 Hackathon** - Won Best AI Hack overall for GPongT, competing against over 800 participants
- **1st Place, CalPoly RvB Cyber Defense Competition (Blue Team)**
- **1st place, Sandia National Labs TracerFIRE 12** - Analyzed logs, completed forensics challenges, and presented findings.

ADDITIONAL SKILLS

Technical Skills: Java, Python, C, C++, Git, Jupyter, GDB, GCC, Bash, Python, Pytorch, Scikit-learn, Matplotlib, Docker, AWS, SQL, FFuf, Burp Suite, SQLMap, Metasploit, Nmap, Web Requests

Languages: Fluent Tamil, Intermediate Spanish