

Venkat Sai Shreyas Arisa

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EDUCATION

Georgia Institute of Technology

Expected: May 2027

BSMS in Computer Science - GPA: 3.88/4.0

Atlanta, GA

- **Courses:** Data Structures & Algorithms, Artificial Intelligence, ML, Databases, Java OOP, Systems & Networks
- **Awards :** 2nd Best Overall Project @HackGT12 | AIME Qual | **Governors Honors Program** Math Finalist

EXPERIENCE

ARTISAN Research Lab @Georgia Tech

May 2025 – Present

ML Engineer - Undergraduate

Atlanta, GA

- Engineered an autoencoder in **Python** using **Pytorch**, achieving 50% dimensionality reduction with a low error of 0.03 on 180+ proteins from **Google DeepMind's AlphaFold2** alongside Google Summer of Code Contributors
- Built a framework using **Matplotlib** and **scikit-learn** to visualize protein structure preservation and family clustering through heatmaps and t-SNE with 90% noise reduction and 0.844 mean correlation between dimensions
- Utilized **distributed systems** in High Performance Computing clusters to improve training time from 2 hours to 5 minutes

GiftSpark

Dec 2024 – Aug 2025

CTO and Co-Founder

Atlanta, GA

- Engineered a full-stack B2B platform using **AWS** Product Advertising API and **OpenAI** to generate personalized gift recommendations for 10,000+ employees with **TypeScript** and React with **MongoDB** for data modeling
- Secured over \$5000 in Create-X backed funding for software development and received interest from 20+ clients
- Optimized **RESTful API** batch processing to reduce latency by 76% (21s to 5s) while maintaining **AWS** compliance
- Implemented secure business-only authentication with **Google OAuth2.0** and automated email delivery with **SMTP**

Apache Airavata

Jan 2025 – May 2025

Software Engineer - Lead

Atlanta, GA

- Developed a **Python** pipeline to manage **SLURM-based** High Performance Computing workloads that improved detection time by 600% through more optimized distributed and parallel systems on a NSF/NASA funded project
- Pioneered and deployed a Flask interface to scan over 650,000 malicious URLs in Linux environments
- Led a four-person engineering team and coordinated **Agile sprints** to deliver production-ready software

Kavi Media

Jun 2024 – Aug 2024

Software Engineer Intern

Remote

- Developed a scalable data ingestion system to process 50k+ multimedia items into **NoSQL MariaDB** and **ElasticSearch**
- Designed **UI** for Podcast screens on an audio app deployed for beta-testing using **React Native** and **JavaScript**
- Leveraged Gorse for **machine-learning-driven** content recommendations enhancing click through rate by 1.5x

PROJECTS

RefNet | Docker, AWS, Python, React, REST API's, Node.js | [RefNet.wiki](https://refnet.wiki)

September 2025

- Won **2nd place Best Overall Project at HackGT** against 900+ competitors for an AI assistant for literature reviews
- Deployed **React** frontend with **dockerized Flask/Python** backend hosted on **AWS EC2** instances for scalability
- Built interactive **D3.js graph** visualizations to analyze 200M+ academic papers with citation and depth control feature
- Integrated **GPT-4o via CedarOS** to directly manipulate the React frontend by highlighting graph nodes and inserting papers by interacting with a draggable chat on a whiteboard-like interface

DJMoody | PyTorch, Next.js, React, Librosa, Github Actions | [Dj-moody.vercel.app](https://dj-moody.vercel.app)

June 2025

- Trained a **PyTorch-based neural network** with 85%+ accuracy to detect audio energy levels on 3 clusters
- Implemented beat alignment and energy matching algorithms to create smooth 30-second transitions with **Librosa**
- Deployed a **Next.js** and **TailwindCSS** web app with CI/CD pipelines using GitHub Actions

Space Debris Collection | C, Docker | [GitHub](https://github.com)

April 2025

- Built a GBA game in **C lang** using DMA, Mode 3 graphics, and hardware interrupts to simulate asteroids & debris
- Containerized the Gameboy Advanced toolchain with **Docker**, ensuring cross-compilation and reproducible builds

SKILLS

Languages: Java, Python, C, C++, SQL/MYSQL, JavaScript, TypeScript, HTML, CSS, Bash

Frameworks: React, React Native, Next.js, Flask, TailwindCSS, MongoDB, MariaDB, Elasticsearch, REST API, PostGres

Developer Tools: Git, Docker, AWS, Jira, Jupyter, CI/CD, TensorFlow, Agile, Linux/Unix, Distributed Systems

Soft Skills: Agile, Adaptive, Leadership, Detail-Oriented, Team-Based, Communicator