Sam Tanjore

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EDUCATION

Master of Science in Data Analytics Engineering – George Mason University, Fairfax, VA   **Jan 2024 – Dec 2025**
Coursework: *big data, Database Management, NLP, Appli. ML., Deep Learning*   *CGPA*: **4.0 / 4.0**
Bachelor's in computer science – Malla Reddy Institute of Technology, Hyderabad, IN   **Aug 2019 – Jul 2023**
Coursework: *Machine Learning, IT Systems, Mathematics, Object-Oriented Design.*   *CGPA*: **7.79 / 10.0**

PROFESSIONAL EXPERIENCE

Graduate Teaching Assistant | George Mason – NLP course   **Jan 2025 - Present**

- Guiding 750+ students on implementing NLP techniques and Python programming for real-world applications.
- Conducted **hands-on workshops** on feature engineering, text preprocessing, and model evaluation.

Customer Service Associate -IT Helpdesk |Mason Recreation – AFC/Skyline   **Aug 2024 – Present**

- Managed and processed an average of 30 transaction requests per shift, leading to positive reviews and increased membership renewals. Utilized **Connect2 and Fusion RMS** for data entry, reporting, and issue tracking, contributing to process improvements and identifying areas for optimization.

Research Assistant | Dr. Ziheng Sun, Geoweaver Research   **Nov 2024 - Jan 2025**

- Maintained and enhanced the **Geoweaver** platform, an open-source **NASA-funded workflow management system**, using **JavaScript, React.js**. Implemented **UI/UX improvements**, reducing page load time by **40%** and enhancing navigation flow, leading to a **25% increase in user engagement**.
- Utilized **Python**, **JavaScript**, and data processing libraries for workflow optimization. Responsible for maintaining the existing codebase and implementing new features and writing research papers on **[Geoweaver, GeoSMART, earth- artificial-intelligence](#)**. Maintained high-quality code with **Git** version control, peer code reviews, and detailed documentation, reducing **bug reports by 30%.**

Software developer Intern | Galanmela India Pvt Ltd.   **Oct 2022 – Feb 2023**

- Developed **high-performance web applications** using **React.js, JavaScript, and GraphQL**, improving site load time by 20%.
- Performed **data analysis using SQL and Excel**, addressing pricing discrepancies and optimizing product recommendations.

ACADEMIC PROJECT EXPERIENCE

Multi-Modal AI Chatbot for Knowledge Retrieval and Voice Interaction | ([GitHub](#))   **January 2025**

- **Built an LLM-**powered chatbot **using LangChain, FAISS, Hugging Face Transformers, and Streamlit.**

Infringement Url Analyzer [[GitHub](#)]   **August 2024**
- Developed Url Analyzer, Achieved 98% accuracy in domain extraction and IP resolution using **urlparse** (Python), **urltools** (R), **socket** (Python), and **nslookup** (R).

Generative AI Chatbot for Knowledge Extraction | [(GitHub)](#)   **October 2024**

- Developed a **Wikipedia-based question-answering system** using **NLP and regex-based entity extraction**.

TECHNICAL SKILLS

- **Libraries**: PyTorch, Pandas, NumPy, Matplotlib, Scikit-Learn, SpaCy, PySpark, ggplot2, Seaborn
- **Awards**: AWS Academy, Azure (Az-900), CPR/First Aid from American Red Cross
- **Languages**: Python, SQL, HTML, CSS, JavaScript
- **Tools** & **Frameworks**: Git, Google Firebase, Excel, FAISS, Tableau, Microsoft Office Suite, Figma, Adobe XD, AWS, Azure (AZ-900 Certified), Databricks cloud, ChatGPT, Claude, LangChain.
- **Security Skills:** Information Security Concepts, Secure Software Development

EXTRA CURRICULAR EXPERIENCE

Graduate researcher | George Mason University (Oct 2023 – Present)

- Conducted quantitative data analysis on **500+ Ground-Penetrating Radar (GPR) scans** achieving **85% accuracy** in identifying corrosion-prone zones in infrastructure using Python, **scikit-learn**, and **Matplotlib**, improving defect detection effi**ciency by 30%.**
- Authoring IEEE-standard research papers on AI-driven radar imaging techniques and corrosion detection.

AI & Data Science Graduate researcher | Text-to-SQL Project (Oct 2023 – Present)

- Designed and implemented a **Large Language Model (LLM)**-powered **Text-to-SQL** system, increasing query **accuracy by 40%** and optimizing structured database retrieval.

Healthcare Graduate researcher | Patient Engagement Initiative (Sep 2023 – Present)

- Created data-driven patient education materials using **Canva** and **Adobe XD**, improving healthcare literacy and increasing **engagement by 20%.** Utilized **data visualization** and analytics tools to track engagement trends and optimize healthcare outreach strategies.

LEADERSHIP AND RESPONSIBILITY

- **Mentor:** Assisted students in Python, ML, and data science projects
- **Open-Source contributor for [Geoweaver, GeoSMART, earth-artificial-intelligence](#)**