Saivarun Tanjore Raghavendra

+1 (703) 459 3068 | stanjore@gmu.edu| LinkedIn | GitHub | Fairfax, VA-22030

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*   *C*GPA: **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.*   *C*GPA: **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.
- Worked closely with IT and operations teams to troubleshoot system issues, ensuring seamless integration of digital membership management and payment processing workflows.
- Collaborated with five departmental teams weekly, achieving an average issue resolution time of under four minutes. Elevated customer satisfaction score from 75% to 90% by offering personalized recommendations.

Research Assistant (Contract) | 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%** and Conducted **data analysis on Earth Science datasets**, enhancing AI-based insights for geospatial research.

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.**
- **Integrated** speech recognition **(Whisper ASR) for** multi-modal query resolution**, achieving 85% query accuracy.**

Infringement Url Analyzer [GitHub]   **August 2024**
- Reduced data complexity by **95%** through flattening nested JSON into structured CSV format. Decreased missing data by 20% using imputation techniques.
- Achieved 98% accuracy in domain extraction and IP resolution using **urlparse** (Python), **urltools** (R), **socket** (Python), and **nslookup** (R).
- Performed comprehensive analysis with pandas and **dplyr**, ensuring actionable insights from the data.
- Created impactful visualizations using **matplotlib**, **seaborn** (Python), and **ggplot2** (R) for clear, data-driven insights.

Generative AI Chatbot for Knowledge Extraction | (GitHub)   **October 2024**
- Developed a **Wikipedia-based question-answering system** using **NLP and regex-based entity extraction**.
- Achieved **70% user satisfaction** with improved response accuracy.

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, FAISS, Tableau, Docker, 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** using **Python** achieving **85% accuracy** in identifying corrosion-prone zones in infrastructure.
- Developed **C-Scans** and **B-Scans** for predictive maintenance 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.
- Applied **natural language processing (NLP)** techniques to enhance user interactions with relational databases, improving accessibility and automation in data-driven applications.

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%.**
- Led quantitative data collection from a cohort of **240+ elderly** individuals (65+ years), ensuring a **98% survey completion** rate for **research accuracy**.
- 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]()**