

SANJYOT SATISH AMRITKAR

+1 934-246-3480 · sanjyotamritkar05@gmail.com · LinkedIn · Github · Portfolio · Stony Brook, NY

EDUCATION

- Stony Brook University**, Stony Brook, NY Aug 2024 – May 2026
Master of Science in Data Science GPA : 3.7/4.0
Coursework: Data Analysis, Big Data Systems, Probability, Statistical Learning/Computing, NLP, Data Visualization.
- Savitribai Phule Pune University**, Pune, India Aug 2019 – May 2023
Bachelor of Technology in Computer Engineering GPA : 3.5/4.0
Coursework: Data Structures, DBMS, AI/ML, Data Mining and Warehousing, Deep Learning, Statistics, IoT.

SKILLS

- Programming Languages:** Java, Python, JavaScript (Node.js, React.js), HTML/CSS, R.
- Data Science:** Pandas, NumPy, Scikit-learn, TensorFlow, Keras, Seaborn, Matplotlib, Plotly, Pytorch, RAG, LLMs, LangChain, LangGraph, Flask, SQLAlchemy.
- Tools & Platforms:** Docker, Kubernetes, Jenkins, Git, Jira, OpenShift, Tableau, PowerBI, Jupyter
- Databases & Cloud:** MySQL, PostgreSQL, MongoDB, Firebase, AWS, Microsoft Azure, Azure AI Foundry.

PROFESSIONAL EXPERIENCE

- Stony Brook University:** Research Assistant Jul 2025 – Present
- Leading the development of an **AI-driven ED Triage assistant** combining **React**, **Python FastAPI**, and **LLMs** to dynamically generate clinical summaries and follow-up questions based on patient inputs.
 - Reduced manual triage questioning load by **~40%** through LLM-driven dynamic prompts, easing nurse workload and accelerating patient intake.
- Nextracker:** AI Software Engineering Intern Jun 2025 – Aug 2025
- Spearheaded AI-driven PoCs integrating **LLMs (GPT-3.5, GPT-4, LLaMA 3, Mistral)** into core products via **Azure AI Foundry**, enabling LLM-powered search and summarization; boosted response speed by **~30%**.
 - Built **RAG pipelines using Go and Angular** with embedding-based and hybrid retrieval, reducing troubleshooting time by **~40%**.
 - Benchmarked **cloud vs. local LLMs**, delivering a **cloud-hybrid-on-prem AI roadmap** balancing accuracy and cost.
- Barclays:** Software Developer Jul 2023 – Jul 2024
- Engineered and optimized **REST APIs** using **Java, Spring Boot, and Gradle**, integrating **AWS (S3, Glue, DynamoDB)** for scalable cloud solutions.
 - Developed and automated a React/Spring Boot logging utility, improving API log analysis speed and **accuracy by 90%**.
 - Strengthened **CI/CD** pipelines by incorporating **SonarQube, Prisma, and JUnit** testing for continuous quality.
- Barclays:** Software Developer Intern Jun 2022 – Jul 2022
- Deployed a **Java-Spring Boot and React** based full-stack **vulnerability analysis dashboard**.
 - **Automated vulnerability tracking** through API-database integration, improving remediation response time by **45%**.

PROJECTS

- Adult Census Income Prediction using Machine Learning** Apr 2025
- Built a supervised ML pipeline on UCI Census data using Random Forest, achieving **92.75% accuracy** and **97.6% recall** for high-income class prediction.
 - Conducted EDA using **Pandas** and **Seaborn** to extract key income trends, followed by **AIC-based feature selection**, class balancing (RandomOverSampler), and model evaluation using AUC, ROC, and cross-validation.
- E-commerce Product Chatbot using LLM and RAG** Jan 2025 – Mar 2025
- Created an **AI-powered chatbot** that answers customer queries about e-commerce products using real Amazon reviews and descriptions, improving contextual understanding and user experience.
 - Constructed a **Retrieval-Augmented Generation (RAG)** pipeline with **FAISS** for vector search and an **LLM** for response generation; implemented a **FastAPI** backend for embeddings and APIs, and a **React** based chat interface.
- Fraud Detection using IBM's Differential Privacy Library** Sep 2022 – May 2023
- Explored and applied IBM's open-source **differential privacy** library, **diffprivlib**, to train **machine learning models** for credit card fraud detection, achieving **95% accuracy** while incorporating privacy-preserving techniques.
 - Contributed the **Isolation Forest** algorithm to the library, enhancing the library's support for **anomaly detection**.

ACHIEVEMENTS / EXTRACURRICULARS

- President: Indian Graduate Student Association(IGSA), Stony Brook University.
- Python tutor: CSTEP program at Stony Brook University
- Mentor at Society of Women Engineers(SWE)
- Women's Representative at Rotaract Club of Zenith, Pune.