SANJYOT SATISH AMRITKAR

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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, Data Management, Big Data Systems, Probability, Statistical Learning/Computing, Natural Language Processing, 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, AI/ML, Data Mining and Warehousing, Deep Learning, Statistics, Internet of Things.

SKILLS

Programming Languages: Java, Python, JavaScript (Node.js, React.js), SQL, HTML/CSS, Flask
Data Science: Pandas, NumPy, Scikit-learn, TensorFlow, Keras, Seaborn, Matplotlib, Plotly, WEKA, Jupyter, D3.js, Retrieval-Augmented Generation (RAG), LLMs
Tools & Platforms: Docker, Kubernetes, Jenkins, Git, Jira, OpenShift, Tableau, PowerBI
Databases & Cloud: MySQL, PostgreSQL, MongoDB, Firebase, H2, AWS, Microsoft Azure

PROFESSIONAL EXPERIENCE

Stony Brook University: Research Assistant   Jul 2025 – Present
- Led the development of **EDTriage**, an AI-driven ED Triage assistant combining **React**, **Python FastAPI**, and **LLM integration** to dynamically generate clinical summaries and follow-up questions based on patient inputs.

Nextracker: AI Software Engineering Intern   Jun 2025 – Aug 2025
- Spearheaded AI-driven PoCs integrating **LLMs(GPT-3.5, GPT-4, LLaMA 3, Mistral)**into Navigator & DataHub via **Azure AI Foundry**,enabling LLM-powered search & summaries; improved latency by ∼**30%.**
- Developed **RAG pipelines(Go, Angular)** with embeddings & hybrid retrieval, cutting troubleshooting time by ∼**40%.**
- Benchmarked **cloud vs. local LLMs**, delivering a **cloud-hybrid-on-prem AI roadmap** balancing accuracy, cost, & security.

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
- Designed and implemented a full-stack dashboard using **Java and React** for vulnerability analysis.

PROJECTS

Adult Census Income Predction 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 Retrieval Augmented Generation   Jan 2025 – Mar 2025
- Developed 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)
- Led a team of 50 members at TEDx CCOEW.
- Women's Representative at Rotaract Club of Zenith, Pune.