Janit Rajkarnikar

+1 (601) 913-1805 | rajkarnikarjanit22@gmail.com | linkedin.com/in/janitrajkarnikar/ | anijani.github.io

Education

University of Southern Mississippi *May 2026*
Bachelor of Science in Computer Science**, Minor in Mathematics and Data Analysis | **GPA: 4.0 *Hattiesburg, MS*
Honors: President's List (All Semesters), Academic Excellence Scholarship
Relevant Coursework: Data Structures & Algorithms, Machine Learning, Probability & Statistics

Technical Skills

Languages: Python, TypeScript, JavaScript, C++, C#, SQL
Frameworks & Libraries: FastAPI, Flask, Express, React, Next.js, Node.js, PyTorch
Tools & Platforms: Git, Docker, GitHub Actions, Postman, Firebase, AWS, Azure, Unity, Expo
Databases: PostgreSQL, MongoDB, MySQL, SQLite

Work and Research Experience

Software Engineer Intern *Aug 2024 – Present*
Woafmeow, Inc. *Remote*

- Implemented a gamified daily task system prioritizing user history employing **FastAPI and React Native (Expo)**, using **PostgreSQL** on **Azure**, resulting in a **30%** increase in user engagement.
- Refactored backend into a layered, modular architecture using FastAPI and **SQLAlchemy**, eliminating over **200 lines** of duplicate logic and improving development speed.
- Implemented **JWT authentication** and role-based access control, securing API endpoints and supporting scalable multi-user permissions.

Research Assistant *May 2024 – Dec 2024*
University of Southern Mississippi *Hattiesburg, MS*

- Fine-tuned a **RoBERTa-base** model using **Masked Language Modeling** with **LoRA-based PEFT** on OpenStack log EventID sequences, achieving a validation loss of **0.3375**.
- Designed a preprocessing pipeline using Drain log parsing and custom vocabulary tokenization, producing 768-dimensional contextual embeddings for anomaly detection.
- Trained **Isolation Forest** and **One-Class SVM** on learned embeddings, outperforming LSTM baselines by over **18%** F1 and achieving Anomaly F1-Scores of **0.9744** and **0.9467**, with ROC-AUCs of **0.9952** and **0.9569**.

Projects

The Designer's Touch ***React, Node.js, Express, Three.js, Firebase, AWS, Azure***

- Built a 3D customization platform using React and Three.js, enabling real-time product previews and interactive design tooling for personalized merchandise.
- Integrated AI-generated designs using Google Vertex AI, allowing users to create custom assets from text prompts for use in the 3D editor.

Emotion Tracker (Emoki) ***React Native, Node.js, Flask, MongoDB, Firebase***

- Created a mobile emotion tracker in **React Native** with **RoBERTa-based** text analysis, using geotagged logs and **headless tasks** to capture sentiment trends and behavioral triggers in the background.
- Developed an **Express backend** with **MongoDB** sync and caching, and integrated a separate **Flask service** for model inference, achieving under **200ms** API latency for responsive UX.

AFM Image Processing Application ***C#, .NET, WPF, Python***

- Developed a Windows desktop app in C# (WPF) integrating embedded Python scripts to process AFM files locally, eliminating server dependency.
- Automated polynomial leveling, masking, and visualization using scikit-learn and matplotlib, enabling batch processing of up to **150 files** in a single run.

Publications

Divine Precious-Esue, **Janit Rajkarnikar**, Brian Bellrose, et al. **Ensemble Machine Learning Approach to Phishing Website Detection**. *Computers and Their Applications (CATA)*, **Springer CCIS**, 2025. **DOI: 10.1007/978-3-031-92178-0_8**.