

Janit Rajkarnikar

Software Engineer · Full-Stack (Web · Mobile · Backend)

+1 (601) 913-1805 · rajkarnikarjanit22@gmail.com · [anijani.github.io](https://github.com/aniJani) · github.com/aniJani · linkedin.com/in/janitrajkarnikar

Education

University of Southern Mississippi

May 2026

B.S. Computer Science, Minor in Mathematics and Data Analysis | GPA: 4.0

Hattiesburg, MS

Coursework: Algorithms, Machine Learning, Data Structures, Operating Systems, Database Systems, Programming Languages, Linear Algebra Honors: President's List (all semesters), Academic Excellence Scholarship, Runner-up Voxo Hackathon

Publications

- [1] J. Rajkarnikar, N. Poudel, and N. Rahimi, "Unsupervised Anomaly Detection in OpenStack Logs via Fine-Tuned RoBERTa Embeddings," *Journal of Cybersecurity, Digital Forensics and Jurisprudence*, vol. 1, pp. 9–21, 2025. (RoBERTa + LoRA/PEFT embeddings; 0.97 F1, 0.99 ROC-AUC)
- [2] J. Rajkarnikar, S. Joshi, and Z. Zhou, "Macro-Market Fusion with Cross-Attention for Equity Return Prediction," *Mathematics*, vol. 14, no. 8, art. 1361, 2026. (XAttnFusion; 0.63 AUROC on SPY, +8.1% over best baseline, $p=0.031$)
- [3] D. Precious-Esue, J. Rajkarnikar, B. Bellrose, et al., "Ensemble Machine Learning Approach to Phishing Website Detection," in *Proc. 40th Int'l Conf. on Computers and Their Applications (CATA 2025)*, San Francisco, CA, Mar. 2025. Springer CCIS, vol. 2435. (Bagging; 98.66% accuracy)

Experience

Software Engineer, Illumibot (ArroyoDev)

Feb 2026 – Present

Flutter, React/TS, Supabase/Deno, Python/OpenCV

Hattiesburg, MS

- Shipped production code across four surfaces (Flutter mobile, React/TypeScript web, TypeScript/Deno serverless on Supabase + Firebase Functions, and a Python/OpenCV microservice) powering a two-sided services marketplace: listings, Stripe Connect payouts, Algolia search, and Supabase Realtime messaging
- Built the projector-to-surface computer-vision pipeline, a Python/FastAPI + OpenCV service (homography, multi-projector stitching, ArUco calibration, LoFTR feature matching on Apple-Silicon MPS) on Cloud Run, consumed in-app through a hand-written GLSL keystone-warp shader

Software Intern, CloudCrust LLC

Sep 2025 – Jan 2026

Next.js, React Native

Hattiesburg, MS

- Designed and developed production web/mobile features (geospatial visualization, location-based data workflows) and implemented authentication and subscription billing flows for deployed applications

Software Engineer Intern, Woafmeow, Inc.

Aug 2024 – May 2025

FastAPI, React Native, PostgreSQL, Azure

Remote

- Developed FastAPI + React Native features backed by PostgreSQL on Azure, improving user engagement by 30%
- Refactored the backend into a modular architecture and maintained it, eliminating 200+ lines of duplicate logic

Projects

RepoSynth – LLM / RAG Code-Retrieval Platform (github.com/aniJani/reposynth)

Python, Rust, TypeScript

- Built a hybrid RAG code-retrieval engine fusing SentenceTransformers + FAISS semantic search with lexical symbol matching, feeding an LLM context engine over large codebases
- Engineered a Rust (tree-sitter, tokio, rayon) parsing daemon and a Python/FastAPI orchestrator (Postgres, Redis queue) with commit-keyed multi-stage caching, cutting repeated re-analysis from 40s to 2s (20x)

asbuilt – Infrastructure-Verification MCP Server for AI Agents

Python, tree-sitter, MCP

- Built a read-only MCP server that extracts a codebase's backend assumptions (Supabase/Firebase/Postgres calls, tables, auth) across TypeScript and Python and verifies them against the live backend with file:line provenance; 118 tests at a near 1:1 test-to-code ratio

Suga – Workflow-Automation Platform (suga.cx)

TypeScript, Fastify, Next.js, Redis

- Lead-built a TypeScript platform automating multi-step workflows across 12+ SaaS integrations with Fastify + BullMQ/Redis workers and a Next.js + React Flow visual builder

Technical Skills

Languages: TypeScript/JavaScript, Python, Rust, Dart, C/C++, C#, SQL (familiar: Go, Java)

Frontend/Mobile: React, Next.js, React Native, Flutter, Expo, Electron

Systems/Backend: FastAPI, Node.js/Express, Fastify, Flask, PostgreSQL, Redis, MongoDB, MCP, Docker, AWS, Azure, Firebase, Supabase, Git

ML/Data: PyTorch, SentenceTransformers, FAISS, tree-sitter, OpenCV, SHAP

Leadership

Vice Head of SWE, Google Developer Group · President, Nepalese Student Association · Treasurer, Cinema Appreciation Club