

PRATIUSH KARKI

Caldwell, NJ · open to relocate · pratiush776@gmail.com · 973-641-3498 · [Portfolio](#) · [GitHub](#) · [LinkedIn](#)

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript (ES6+), SQL, HTML5, CSS3, Bash.

Full-Stack: React, Next.js, Node.js, Express, FastAPI, REST API design, WebSockets, JWT and role-based auth, SSR/SSG, SWR, Tailwind, MUI, Zustand, Framer Motion, GSAP, Figma, PostgreSQL, Supabase, Firebase, Redis, NoSQL, schema design, normalization, row-level security, Docker, AWS, Vercel, Git, GitHub Actions (CI/CD), Linux, Pytest, Playwright, Vitest, system design.

AI, ML & Data: LLM integration, RAG, embeddings, vector search (ChromaDB), semantic retrieval, prompt engineering, agentic workflows, model evaluation, LLaMA, Ollama, scikit-learn, PyTorch, TensorFlow, pandas, NumPy, statistical modeling, segmentation, Tableau, Power BI, advanced Excel, Claude Code, Cursor.

EXPERIENCE

New York Jets – Data Analyst

Florham Park, NJ · Jan 2026 – May 2026

- Analyzed survey and historical data from **2,100+** fans in Python (pandas; segmentation, statistical modeling) to identify the behavioral drivers of engagement and loyalty.
- Led a 5-person analytics team, turned the findings into three growth strategies, and presented them directly to Jets executives.

MicroJournal – Tech & Infrastructure Lead

Caldwell, NJ · Spring 2026

- Took a journaling product from 0 to 1 in a team of four: authentication, protected routing, daily-entry and streak-analytics views in React and TypeScript on Firebase, plus the event-analytics layer the team used to read behavior.
- Built in a startup studio led by the **CTO and CPO of Instructure** (Canvas LMS): pitched product direction and freemium pricing to them, reworked it on their feedback, and delivered the result as an iOS app.

Whisk It All – Full-Stack Software Engineer (Intern)

Glen Ridge, NJ · May 2025 – Aug 2025

- Built and deployed the production web platform for a cafe and bakery: third-party API integrations, GitHub-connected publishing pipelines, CDN delivery, SEO, and a lightweight CMS the owners run themselves; cut their vendor dependency by **~80%**.
- Redesigned customer-facing flows from a hi-fi Figma prototype; the site now converts **~30%** of visitors.
- Owned production support: traced customer-reported issues from logs and reproduction steps to root cause, then shipped and verified fixes.

Caldwell University – Systems Assistant & Student Tutor

Caldwell, NJ · Jan 2023 – Jan 2025

- Tutored Data Structures, Algorithms, and Full-Stack Development across ~1,500 student touchpoints.
- Ran front-line software, hardware, and network support through internal ticketing and chat queues.

PROJECTS

Lucid Tone: Real-Time AI Music & Ambience Platform [🔗](#)

Python, FastAPI, WebSockets, Redis, React, WASM

- Designed and built solo: a Markov-chain composition engine grounded in music theory, a rendering pipeline that generates audio **~100x faster than real time**, and a WebSocket transport with persistent sessions, buffering, and Redis-backed state.
- Evaluated webhooks, WebRTC, and WebSockets before committing to the transport layer; kept egress low with Opus encoding and covered the engine with deterministic tests.

Local RAG Agent [🔗](#)

Python, ChromaDB, LLaMA, Streamlit, Docker

- Built a fully local, privacy-first **retrieval-augmented generation** system that answers questions over **200+** unstructured legal documents with grounded, source-traceable citations; no data leaves the machine.
- Implemented the four-stage pipeline (ingestion, embeddings, semantic vector retrieval, LLaMA generation) and traced bad answers back to retrieval versus prompting. Three-person team with Git workflows and code review.

NILINK: NIL Marketplace Platform [🔗](#)

Next.js, React, TypeScript, Supabase (PostgreSQL), Tailwind

- Built a live two-sided marketplace where college athletes and brands run name-image-likeness deals end to end: campaign discovery, applications, offers, contracts, and execution.
- Modeled the deal lifecycle in PostgreSQL with row-level security; role-aware routing and protected API routes keep athlete and brand data separate. Capstone Showcase, 2026.

Home Doc: AI Health Insight App [🔗](#)

React, Node.js, Express, Ollama, LLaMA 3

- Built at HackNJIT: a symptom checker that runs LLaMA 3 locally through Ollama and returns preliminary health insights and recommendations in plain language, with clear limits on what the model should be trusted for.

RoomMates: Household Management App [🔗](#)

Node.js, Express, JavaScript, NeDB

- Wrote the backend from scratch with no framework scaffolding: REST endpoints, CRUD over a document store, JWT authentication, and protected sessions for shared chore tracking.

RESEARCH

AI Sycophancy and LLM Reliability [🔗](#)

Sole-authored, published on JSTOR

- Modeled why LLMs tuned on RLHF drift toward sycophancy, and traced the five-stage loop vulnerable users are susceptible to: emotional trigger, biased query, sycophantic response, flawed belief update, amplification.
- Defined boundary conditions and falsifiable predictions, then specified a four-tier mitigation framework across training, product guardrails, and interface design. Applies directly to LLM evaluation, alignment, and trust and safety.

EDUCATION

Caldwell University

Caldwell, NJ

B.S. Computer Science; Business Analytics Minor; 3.85 GPA; Honors Student, Magna Cum Laude

- Relevant coursework:** Artificial Intelligence, Software Engineering, Data Structures & Algorithms, Operating Systems, DBMS, Full-Stack Development, Computational Models & Simulations, Data Analytics, Probability & Statistics, Discrete Mathematics.