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PROJECTS

- DevAtlas** | [Live](#) | [GitHub](#) | *Next.js, FastAPI, PostgreSQL, SQLAlchemy, Alembic, TypeScript* Sep 2026 – Oct 2026
- Built and deployed a full-stack developer profile directory with GitHub OAuth (read-only scope), search, and shareable profile pages; live in production with 12 registered users
 - Cut directory page queries from 38 to 6 by batching lookups and replacing in-memory counting with SQL COUNT
 - Implemented per-visitor rate limiting (30 requests/min) behind Vercel's proxy by forwarding client IPs from Next.js with HMAC-SHA256 signatures verified by the API
 - Built a moderation system with role-based access, user reports, time-limited suspensions, an audit log, and a TOTP MFA-protected staff panel (recovery codes, logout after 5 failed attempts, 30-minute elevated sessions)
 - Shipped with GitHub Actions CI (lint, typecheck, build, migrations on a clean Postgres), 13 backend test modules, 13 Alembic migrations, and Fernet-encrypted GitHub tokens; account deletion revokes the GitHub grant
- Nexus** | [GitHub](#) | *FastAPI, React/TypeScript, MCP, SQLite, Ollama* May 2026
- Built an open-source, local-first developer dashboard aggregating live GitHub, LeetCode, and fitness data through 3 custom MCP servers into a single FastAPI backend
 - Designed each MCP server as an independently pluggable data source behind a shared React/TypeScript frontend
 - Added an optional Ollama-powered daily brief summarizing developer metrics in about 4s, with no data leaving the local machine
- Local RAG Pipeline** | [GitHub](#) | *FastAPI, React/TypeScript, SQLite, sentence-transformers, Ollama* Jul 2026
- Built a local-first RAG system for grounded question-answering over uploaded PDFs using Qwen 2.5, with zero external API calls
 - Implemented chunking, sentence-transformer embeddings, and cosine similarity search; ingested a 471-page PDF (about 610KB) in about 55s with embeddings persisted in SQLite
 - Built a streaming FastAPI backend over Server-Sent Events: retrieval through token-by-token generation in about 18s end-to-end on the same document
- AceStar Nexus** | [GitHub](#) | *Tauri, FastAPI, React/TypeScript, SQLite, PyInstaller* Jun 2026
- Shipped a standalone Windows executable (about 31MB) bundling the FastAPI backend as a PyInstaller sidecar; about 5s cold start, about 208MB total idle memory
 - Built a priority-focused, always-on-top desktop widget with MCP-backed data and native desktop notifications
- Cipher-Vault** | [GitHub](#) | *Python, Cryptography, AES-256-GCM* Jan 2025
- Built a web-based secure storage tool with client-side AES-256-GCM encryption; the server stores only ciphertext, so a storage breach exposes no plaintext
 - Separated encryption logic from file I/O so the cryptographic core is independently reusable

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, SQL, C++, C
Backend: FastAPI, REST APIs, PostgreSQL, SQLite, SQLAlchemy, Alembic, OAuth 2.0, JWT, Server-Sent Events, WebSockets, rate limiting, MCP protocol
Frontend: React, Next.js (App Router), TypeScript, Tauri
Security: AES-256-GCM, Fernet, TOTP MFA
Tools: Git, GitHub Actions, Docker, Ollama, PyInstaller, Linux, Vercel, Render, Neon
Problem Solving: [LeetCode](#), 150+ problems solved (C++)

EDUCATION

Amity University Lucknow

B.Tech Computer Science and Engineering — CGPA: 9.43

Lucknow, Uttar Pradesh, India

2024 – Expected 2028