

Kushagra Tiwari

Phone | Mail | Linkedin | Github | Portfolio

EDUCATION

National Institute of Technology Karnataka, Surathkal
Bachelor of Technology in Electrical and Electronics Engineering

Aug 2023 – Present
CGPA: 7.14/10

EXPERIENCE

Magi (Node.js, BullMQ, REST APIs, Gen AI, MCP)
Software Development Engineer Intern

Apr 2026 – Present
Remote

- Engineered an **event-driven scheduler** for recurring jobs, delayed execution, distributed automation, contextual dispatch, retries, and failure recovery.
- Integrated scheduler with a workflow orchestrator to chain tasks, manage workflow, and launch agent-triggered jobs.
- Architected backend **REST APIs** for generative AI, competitive intelligence, content pipelines, and job lifecycle management; exposed workflows as schema-validated **MCP tools**.

PipesHub (Electron, TypeScript, Node.js, LLMs, SaaS Integration)
Software Development Engineer Intern

Jan 2026 – Jun 2026
Remote

- Developed production-grade **SaaS connectors** that integrated enterprise applications with AI search, agents, workflow automation, and tool execution.
- Architected Electron bridge for filesystem access, sandboxed execution, host orchestration, and desktop-to-cloud workflows.
- Built recursive file synchronization pipelines with delta tracking, resumability, conflict-safe writes, metadata handling, and failure recovery; applied schema-driven LLM action validation for deterministic tool execution.

Acredge | Python, n8n, Graph db, LLM APIs, Vector Search
Software Development Engineer Intern

Nov 2025 – Apr 2026
Remote

- Reduced retrieval latency by **60%** by parallelizing search pipelines, optimizing ranking stages, and eliminating API response bottlenecks.
- Built an **AI orchestration system** for real-estate workflows using n8n, LLM APIs, automation tools, and webhooks.
- Executed **recommendation pipelines using graph databases** to enable relevance ranking, personalization, behavioral recommendations, and improved retrieval quality.

LeastActions (Node.js, AWS EC2, Nginx, Docker, CI/CD)
Software Development Engineer Intern

Oct 2025 – Feb 2026
Remote

- Built backend APIs for sandboxed code execution and collaborative IDE workflows, including workspace state, execution metadata, and job results.
- Structured modular API contracts, validation layers, and request-state flows to improve stability and reduce regressions.
- Deployed services to **AWS EC2** through CI/CD pipelines, configuring Linux, Nginx, reverse proxying, and production process management.

PROJECTS

Gapi – FastAPI-Inspired Go Web Framework

Jun 2026 – Jul 2026

Go, net/http, OpenAPI 3.1, Generics, Validation, Dependency Injection, CLI

- Developed a Go web framework on **net/http** with typed generic handlers, route groups, middleware, dependency injection, and type-safe routing APIs.
- Engineered request binding and validation for path, query, header, cookie, and body parameters, supporting validation tags and custom validators.
- Deployed **OpenAPI 3.1** generation, interactive API documentation, RFC 9457 problem details, response serialization, security metadata, testing helpers, and CLI tooling.

VaultLens – Local-First AI Memory Engine

May 2026 – Jun 2026

Electron, TypeScript, SQLite, RAG, Embeddings, Vector Search

- Built a private, local-first AI memory engine using Electron, TypeScript, SQLite, vector embeddings, semantic search, and desktop content indexing.
- Modeled **RAG indexing and retrieval pipelines** with chunking, metadata extraction, evidence-grounded generation, and source citations.
- Launched retrieval tracing, task extraction, timeline reconstruction, and context-aware synthesis to transform indexed content into actionable memory workflows.

TECHNICAL SKILLS

Languages: Go, TypeScript, JavaScript, Python, SQL, C++

Backend and APIs: Node.js, NestJS, Express.js, FastAPI, Django, REST APIs, WebSockets, RBAC

AI: Gen AI, RAG, AI Agents, MCP, LangChain, LangGraph, Tool Calling, Embeddings, Vector Search, Semantic Search

Systems and Data: Distributed Systems, Event-Driven Systems, Async Workers, Job Queues, Cron Schedulers, PostgreSQL, MongoDB, SQLite, Redis, Kafka, Celery, BullMQ, Firebase

Cloud and DevOps: AWS EC2, Docker, Linux, Nginx, Git, CI/CD

Frontend: React, Next.js, Electron, React Native, Flutter, Swift