

# Yogeesh Yadappanavar

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## SUMMARY

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Software engineer with 1.5+ years of production experience building scalable microservices and event-driven systems. Hands-on exposure to RAG pipelines, LangChain, and vector databases (Milvus) through applied work on a chemical patent intelligence product. Building MindPattern — a biosensor + LLM startup for emotional and cognitive navigation. Targeting AI engineering roles at the intersection of systems and applied ML.

## EXPERIENCE

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### Software Engineer | [Simreka](#) · Bengaluru, KA

Feb 2024 – Present

- Architected and shipped a Life Cycle Assessment (LCA) module end-to-end — migrations, Eloquent models, repository pattern, controller, and Pinia store — as part of the PE2 chemical process engineering SaaS platform.
- Built real-time cross-application sync using WebSockets, enabling live state propagation across modules with zero polling.
- Designed drag-and-drop process flow editor using Vue Flow; integrated into the core simulation pipeline used by engineers.
- Engineered async task queues with RabbitMQ + Redis, including Dead Letter Queues (DLQ) for failed/skipped update recovery, reducing processing failures by ~40%.
- Currently building an analytics platform handling multi-source process simulation data with aggregation and charting pipelines.
- Set up and maintained AWS infrastructure (EC2, S3, RDS) with CI/CD via GitHub Actions across staging and production environments.

### Software Engineer Intern | [Pristine Title Services](#) · Bengaluru, KA

Aug 2023 – Nov 2023

- Built full-stack modules with React/Redux frontend and Express/Flask backends; implemented JWT-based auth and role-based access control.
- Deployed services on AWS (EC2, Lambda) following security and performance standards.

### Software Engineer Intern | [Mission Sustainability](#) · Bengaluru, KA

Oct 2022 – Jan 2023

- Built serverless microservices on AWS Lambda + Next.js for real-time data handling.
- Designed PostgreSQL schemas and implemented GraphQL APIs using Pothos and Prisma.

## PROJECTS

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### MindPattern (Founder) — *Next.js, Python, FastAPI, LangChain, biosensor APIs*

- Building a hardware-AI startup combining wearable biosensors (HRV, GSR) with LLM-driven emotional and cognitive navigation.
- Designed a six-layer hardware-AI integration stack; implemented signal processing pipeline using neurokit2; prototyping guidance loop with follow-up check-ins via LLM API.
- Building CodeGraph — a local knowledge graph tool over the MindPattern codebase with SQLite WAL backend, used by Codex CLI as an AI agent for context-aware code navigation.

### RAG Pipeline — Chemical Patent Intelligence — *Python, LangChain, Milvus, Flask*

- Contributed to a production RAG pipeline over a corpus of chemical patents using Milvus as the vector store and LangChain for orchestration; exposed via Flask API to the PE2 platform.

### Structify CLI — *Node.js, Express, React, MongoDB*

- CLI tool to auto-generate project folder structures and JSON blueprints for team onboarding; supports customizable, reusable templates.

## SKILLS

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**AI / ML:** LangChain, RAG, Milvus, vector databases, LLM API integration, neurokit2, spaCy

**Backend:** Python, Flask, FastAPI, PHP (Laravel), Node.js, Express, GraphQL, REST, WebSockets

**Frontend:** Vue 3, Nuxt 3, Pinia, React, Next.js, Redux, Vue Flow

**Infra & Messaging:** AWS (EC2, S3, RDS, Lambda), Docker, Redis, RabbitMQ, DLQ, GitHub Actions, CI/CD

**Databases:** MySQL, PostgreSQL, MongoDB, SQLite, Milvus

**Languages:** Python, JavaScript/TypeScript, PHP, C++, SQL

## **EDUCATION**

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### **B.E. in Mechanical Engineering**

2019 – 2023

Visvesvaraya Technological University, Karnataka