

Krishna Tripathi

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EDUCATION

Indian Institute of Information Technology, Nagpur
B.Tech in Computer Science and Engineering

Dec 2021 – May 2025
Nagpur, India

TECHNICAL SKILLS

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

Frameworks & Tools: ReactJS, Node.js/ExpressJS, EchoLabstack (Go), TailwindCSS, Git, Docker, PostgreSQL, YugabyteDB, MongoDB, Python (Pandas, NumPy), SQL, BigQuery

EXPERIENCE

YugabyteDB

Sept 2024 - Present

Bengaluru, India

Software Engineer Intern → Software Engineer I

- Integrated YugabyteDB embedding store into LangChain4j, enabling vector similarity search with HNSW indexing and **reducing query latency by 15%**. ([commit](#) – [docs](#))
- Implemented pypython extension in YugabyteDB, enabling in-database Python execution for **500+ vector operations per second** while **improving data security by 60%** by containing sensitive operations within the database.
- Engineered Copilot for Voyager using LangGraph, Python, and MCP with RAG architecture, **reducing migration setup time by 60%** for **100+ users** via conversational AI assistance and automated documentation updates.
- Designed xCluster backend services (Go) and UI, improving data resiliency by **40%** and optimizing DR node selection, reducing response time from **450ms** to **120ms**.
- Integrated lag metrics in **C++** for Prometheus and UI visualization, optimizing APIs to improve response times by **35%**.
- Optimized Go test pipelines using Jenkins and Groovy scripts, running tests pre-deployment instead of on every commit, **reducing CI/CD runtime by 40%** and saving **3+ hours daily** in build times.
- Architected data pipelines using TypeScript/Go on Cloud Run, processing growth metrics and GCS data through MadKudu for lead scoring, syncing to Salesforce CRM and BigQuery, **improving sales operations by 45%**.

Zluri

Aug 2024 - Sept 2024

Bengaluru, India

Software Engineer Intern

- Resolved **13+ critical bugs** using JavaScript/Node.js and MongoDB, **created testing framework** with QA dashboards, improving system reliability by **20%**, query performance by **30%**, and test coverage by **20%**.

PROJECTS

CineSphere: Movie Discovery Platform

April 2024 – Present

ReactJS, Node.js, YugabyteDB, Sequelize, Docker, GitHub Actions, TailwindCSS, Redux Toolkit

[SOURCE CODE](#) | [LIVE DEMO](#)

- Integrated YugabyteDB with Sequelize ORM and SSL, ensuring **99.9% uptime for 100+ MAU** and accelerating queries by **40%**.
- Configured intelligent caching via GitHub Actions, reducing API costs by **75%** and page load from **3.2s to 1.8s**. Deployed JWT refresh token rotation with HTTP-only cookies for **zero XSS vulnerability**.
- Engineered features: Graph-based social network (BFS), rich-text editor (DOMPurify), lazy loading, Framer Motion animations, and serverless Vercel deployment, **decreasing page load by 450ms** and improving perceived performance by **25%**.

YB Voyager Copilot: AI-Powered Database Migration Assistant

Jan 2025 – Present

LangGraph, FastAPI, React/Next.js, Python, MCP, Docker, YugabyteDB, PostgreSQL, RAG [DOCKER HUB](#) | [ARCHITECTURE](#) | [DEMO](#)

- Architected AI-powered migration copilot using LangGraph multi-agent system (3 agents) with MCP integration, **reducing migration setup time by 60%** for **100+ users** via conversational guidance.
- Implemented 3-tier RAG architecture with pgvector on YugabyteDB, achieving **95%+ accuracy** in Q&A with automated documentation updates, **improving response relevance by 40%**.
- Built microservices architecture with 5 Docker containers, FastAPI REST API, React/Next.js frontend, and Go-based MCP server integration, **improving migration success rate by 35%** and **reducing deployment time by 45%**.
- Automated CI/CD pipeline with GitHub Actions for building and publishing Docker images to Docker Hub, enabling seamless deployment and **reducing manual deployment time by 70%**.
- Engineered PDF export with Playwright, automated assessment with sizing recommendations, and Docker volume mounts, **enhancing user experience by 30%** and **reducing troubleshooting time by 50%**.

ACHIEVEMENTS

- Worked on "Best Use of AI" project in hackathon - YB Voyager Copilot. **Knight level (1994 - Top 2.58%)** on LeetCode with **1300+ problems solved** (430K+ users), **4-star (1944)** on CodeChef (200K+ users). **3rd place** in Algorithmia Coding Contest, Tantrafiesta 2023. Ranked **426th** in CodeChef Starters 113 Div 2 (11K+ participants).