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: ReactJS, Node.js/ExpressJS, EchoLabstack (Go), TailwindCSS, Material UI

Tools: Git, Docker, Postman, VS Code, PostgreSQL, YugabyteDB, MongoDB

Coursework: Operating Systems, Computer Networks, DBMS, DSA, Distributed Systems, Cryptography

EXPERIENCE

YugabyteDB Software Engineer Intern \rightarrow Software Engineer I

Sept 2024 - Present Bengaluru, India

- Contributed YugabyteDB embedding store integration to LangChain4j (commit docs), implementing vector similarity search with HNSW indexing, payeetor support, and HikariCP connection pooling for AI/ML applications.
- Integrated plpython extension in YugabyteDB to execute Python code within the database, enabling direct embedding generation and storage for vector operations without external dependencies.
- Built Copilot for Voyager (DB migration tool) using LangGraph, Python, and MCP, implementing RAG architecture for conversational migration assistance with automated cron jobs for real-time documentation updates.
- **Developed yugabyted UI for Voyager** (open-source), building end-to-end migration workflow covering assessment, schema conversion, data migration, and verification steps for seamless database transitions.
- 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%.
- Automated 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.
- Built web scraping pipeline using TypeScript and Cheerio on Cloud Run Functions (scheduled every 3 days), extracting growth metrics and pushing to BigQuery with Looker Studio dashboards for data visualization and analytics.
- Built automated data pipeline using Go on Cloud Run Jobs (scheduled daily), processing GCS bucket data through MadKudu for lead scoring and account creation, syncing to Salesforce, streamlining sales operations by 45%.

Software Engineer Intern

Aug 2024 - Sept 2024

Bengaluru, India

• Fixed 13+ critical bugs using JavaScript/Node.js and MongoDB, built automated API testing framework with monitoring dashboards, improving system reliability by 20%, query performance by 30%, and test coverage by 20%. Collaborated with QA on CI/CD pipelines.

PROJECTS

CineSphere: Full-Stack Movie Discovery Platform

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

April 2024 - Present

SOURCE CODE | LIVE DEMO

- Used YugabyteDB (distributed PostgreSQL) with Sequelize ORM, connection pooling, and SSL authentication, achieving 99.9% uptime, serving 100+ MAU, and 40% faster queries.
- **Built automated caching** via GitHub Actions (3x daily TMDB sync), reducing API costs by **75**% and page load from **3.2s to 1.8s**. Implemented JWT refresh token rotation with HTTP-only cookies for **zero XSS vulnerability**.
- Engineered features: Graph-based social network (BFS for friend recommendations), rich-text editor (DOMPurify XSS sanitization), serverless Vercel deployment with CI/CD.
- Enhanced UI/UX: Canvas-based dominant color extraction for dynamic theming, lazy loading, Framer Motion animations, axios interceptors, achieving Lighthouse 95+ and 30% engagement boost.

Open Threads Reminder: AI-Powered Slack Bot

July 2024 - Present

VertexAl, Slack API, Go, Python, ReactJS, PostgreSQL, GCP

SOURCE CODE | VIDEO DEMO

- Built enterprise Slack agent using VertexAl for intelligent thread classification and RAG retrieval system integrating GitHub/JIRA/docs for duplicate detection, achieving 90%+ confidence scores and preventing 95% of critical bugs from falling through cracks.
- Deployed full-stack solution on GCP with Go backend, React dashboard, and PostgreSQL, reducing incident response time by 50% through automated stakeholder summaries and ticket tracking.

ACHIVEMENTS

- Knight level (1944 Top 5.8%) on LeetCode (430K+ users), 3-star (1735 Top 4.2%) on CodeChef (200K+ users).
- 3rd place in Algorithmia Coding Contest. Tantrafiesta 2023. IIIT Nagpur, Ranked 426th in CodeChef Starters 113 Div 2 (11K+ participants).