K.Boopathi

EXECUTIVE SUMMARY

Full-Stack Engineer & Infra Developer with hands-on experience in building scalable applications and optimizing cloud infrastructure. Skilled in DevOps, Cloud, and Full-Stack Development, with a strong focus on performance tuning and system reliability. Passionate about simplifying complex systems and sharing real-world lessons as a tech blogger. Currently diving into Generative AI, applying it to build practical, real-world tools

WORK EXPERIENCE

Full Stack Developer | Klenty | March 2022 - Present

Generative AI

- Designed a workflow builder enabling LLMs to perform complex multi-step voice workflows.
- Built an automated code review agent, reducing manual review effort and improving code quality.
- Developed a real-time AI voice agent using Pipecat and open-source models.
- Delivered a proof of concept for an Al-powered Smart Call Agent using Twilio and ElevenLabs.

Cloud Infrastructure & DevOps

- Collaborated with DevOps to migrate production from Heroku to Kubernetes, implementing zerodowntime deployments and health probes to prevent gateway timeouts.
- Collaborated with DevOps to migrate cloud-based solutions such as Redis, RabbitMQ, Meilisearch and Vault to self-hosted infrastructure.
- Designed and implemented a custom domain tracking system in Kubernetes for customer mail handling,
 SSL management, and domain orchestration..

• Performance Optimization

- Reduced frontend build times by 70% (Webpack → Rspack), boosting developer productivity by 80%.
- Cut TypeScript compilation from 2 minutes to 0.25 seconds using Rust-based SWC, accelerating backend testing and deployment.
- Resolved a frontend memory leak in the Twilio package, eliminating customer complaints about slowness during heavy call usage.

Incident Response & Debugging

- Mitigated a Redis overload during a DDoS attack, optimizing session handling and reducing Redis load by 90%.
- Fixed critical production issues, including Kubernetes authentication cookie failures, AWS Lambda deployment crashes, and Nainx proxy misconfigurations...

Tech Blogger | Dev.to, Medium, Personal Blog | 2024 - Present

- Shared insights on debugging, infrastructure challenges, and automation through blogs and technical content.
- Created a Sherlock Holmes-inspired debugging series, making technical issues engaging.

MERN Stack Developer | ChefAtHome FoodTech LLP | March 2021 – September 2021

- Strengthened platform security by addressing vulnerabilities, increasing security robustness by 80%.
- Refined database queries, decreasing response times by 45%.
- Ensured ACID compliance for critical transactions, safeguarding data integrity.

PROJECTS

• CallCoach - AI-Powered Sales Call Analyzer

- Developed an Al-driven coaching tool to transcribe and analyze sales calls for real-time feedback.
- Showcased at the AssemblyAI Hackathon, highlighting AI-driven business enablement.

<u>Call Agent – AI-Powered Automated Calling</u>

• Developed an Al-powered voice bot using Twilio & Eleven Labs, automating customer interactions and reducing manual effort.

RAG – Retrieval-Augmented Generation

- Developed a UI application showcasing RAG model capabilities for the Dev.to Hackathon (PGVector Challenge).
- Implemented chat interactions with website content, files, and Dev.to articles.
- $\bullet \ \ \mathsf{Added} \ \mathsf{customizable} \ \mathsf{text} \ \mathsf{chunking} \ \mathsf{and} \ \mathsf{PGVector} \ \mathsf{with} \ \mathsf{PostgreSQL} \ \mathsf{for} \ \mathsf{optimized} \ \mathsf{data} \ \mathsf{retrieval}.$

Hirezen

 A Chrome Extension that assists interviewers by generating Al-based, role-specific questions, capturing feedback, and exporting it as a professional PDF report for HR.

SKILLS

- Programming Languages & Frameworks: MERN Stack (MongoDB, Express.js, React, Node.js), Python, Java, C, C++
- Databases: MongoDB, Vector Databases
- Search Engines: Meilisearch, Elasticsearch
- · Tools & Platforms: Git, GitHub, Docker, Kubernetes, Azure, AWS
- Generative AI: LLMs, LangChain, OpenAI API, Retrieval-Augmented Generation (RAG)

ACHIEVEMENTS

- Culture Champion (Klenty) Recognized for consistently driving results through initiative, ownership, and technical expertise.
- Star of the Month (ChefAtHome) Awarded for outstanding performance during the internship.
- Hacktoberfest (2020/2023/2024) Successfully contributed to open-source projects in an event by DigitalOcean.
- 1st Place Code Debugging (2018) Einstein College of Engineering.
- 1st Place Tech Fest Quiz (2019) VV College of Engineering.
- 1st Place TechTonic (2019) National Engineering College.
- 3rd Place KIT Hackathon (2019) Kalasalingam Institute of Technology.

EDUCATION

Computer Science Engineering | CGPA: 8.2 (2018–2022)

Einstein College of Engineering, Tirunelveli, Tamil Nadu