K.Boopathi

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SUMMARY

AI Full-Stack Engineer 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

SKILLS

- **Generative AI:** LLMs, LangChain, OpenAI API, Retrieval-Augmented Generation (RAG)
- **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

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 AI-powered Smart Call Agent using Twilio and ElevenLabs.
- **Cloud Infrastructure & DevOps**
  - Collaborated with DevOps to migrate production from Heroku to Kubernetes, implementing zero-downtime 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 Nginx proxy misconfigurations..

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

- Share insights on debugging, infrastructure challenges, and automation in tech.
- 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 to maintain data integrity.

ACHIEVEMENTS

- **1st Place – DinoDial Hackathon (2024)** – Developed an end-to-end voice AI workflow using DinoDial to automate HR screening interviews.
- **Culture Champion (Klenty)** - Recognized for fostering a high-performing team.
- **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

PROJECTS

- HiringAI
  - AI-powered telephony platform designed to revolutionize the recruitment process by automating the initial phone screening round.
- PromptEval
  - Frontend-only LLM prompt evaluation, auto-eval, and style simulation platform for rapid testing and comparison across models.
- CallCoach – AI-Powered Sales Call Analyzer
  - Developed an AI-driven coaching tool to transcribe and analyze sales calls for real-time feedback.
  - Showcased at the AssemblyAI Hackathon, highlighting AI-driven business enablement.
- Call Agent – AI-Powered Automated Calling
  - Engineered an AI-powered voice bot using Twilio & Eleven Labs to automate customer interactions.
  - Minimized customer service response times by 40% through AI-driven automation.
- RAG – Retrieval-Augmented Generation
  - Designed a UI application to explore RAG model capabilities for the Dev.to hackathon.
  - Implemented chat interactions with website content, files, and Dev.to articles.
  - Integrated OpenAI and OLLAMA for diverse language model support.
  - Added customizable text chunking and PGVector with PostgreSQL for optimized data retrieval.
- Hirezen
  - A Chrome Extension that assists interviewers by generating AI-based, role-specific questions, capturing feedback, and exporting it as a professional PDF report for HR.