Dhanesh Rao Kodey

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Professional Summary

System focused Software Engineer with 3 years of experience designing scalable, secure, event-driven systems for financial and logistics domains. Strong in system design, concurrency, microservices, and cloud-native deployments. Experienced with Java, Spring Boot, Kafka, Redis, and AWS. Passionate about AI-driven system optimization and observability.

Work Experience

Bank of America
Software Engineer
San Jose, CA| March 2025 – Present

- Architected high-throughput Spring Boot microservices and Kafka pipelines supporting **~25K concurrent requests/sec**, achieving **<180ms latency** under peak load through async I/O and optimized thread management.
- Improved performance of critical transaction APIs by **37%** by implementing connection pooling, non-blocking request handling, and optimized reactive patterns.
- Engineered multi-threaded transaction verification pipelines using **Executor Service** and **Completable Future**, boosting data throughput by **32%** and stabilizing performance during trading spikes.
- Built Kafka Streams + Redis–powered event-processing workflows enabling **parallelized real-time event handling**, reducing peak system load by **~28%** and cutting processing delays.
- Strengthened security posture by implementing **Spring Security, JWT authentication, TLS/SSL encryption, and API rate limiting**, ensuring full **PCI-DSS compliance** with zero critical findings.
- Enhanced real-time monitoring dashboard performance by **22%** through Angular 15 optimizations including lazy loading, OnPush detection, and virtual rendering.
- Collaborated with DevOps to containerize legacy middleware and migrate to a **scalable microservices architecture**, improving deployment frequency by **3×** and decreasing outage risks by **50%**.
- Tuned Kafka consumers by optimizing partition strategy, batching, and lag monitoring, reducing consumer lag by **40%**during high-volume financial events.
- Improved database reliability by integrating Redis caching with TTL-based eviction, reducing repetitive DB calls by **55%** and stabilizing backend performance.

Real Variable Digital Asset Services Pvt. Ltd
Software Engineer

- Designed and deployed a high-availability shipment intelligence platform using Spring Boot, Redis, and PostgreSQL, achieving **99.9% uptime** while scaling to **15K+ API requests/hour**.
- Reduced alert-generation latency by **25%** by implementing async event-driven pipelines through Redis queues and Kafka topic–based processing.
- Eliminated over-fetching by **35%** through GraphQL integration with optimized resolvers and field-level caching, significantly improving client data access efficiency.
- Developed AWS + Docker–based CI/CD pipelines with blue/green deployments, cutting deployment time by **70%** and ensuring consistent, fault-tolerant releases.
- Improved system reliability and scalability by configuring **AWS RDS read replicas**, ECS auto-scaling policies, and multi-tier health checks, reducing production incidents by **~40%**.
- Enhanced distributed system observability by adding structured logging, tracing, and service-level dashboards, reducing debugging time by **>30%** for critical workflows.
- Optimized database-heavy workflows by adding strategic Redis caching and query tuning, reducing expensive SQL reads by **~50%** and improving end-to-end response times.
- Improved cross-team integration by documenting API schemas, workflow diagrams, and deployment runbooks, accelerating onboarding and reducing integration issues.

EDUCATION

Rowan University, New Jersey, USA | (GPA 3.8)
Master of Science (M.S.), Computer Science

- Coursework Distributed Systems, Cloud Computing, Data-Driven Application Design, Software Architecture, AI-Powered Automation.

Chaitanya Bharathi Institute of Technology (CBIT) - Hyderabad, India | (GPA 3.76)
Bachelor of Technology (B.Tech), Electronics and Communication Engineering.

Personal Projects

Customer Finder Tool (Deep Learning + OpenAI + Bing Search API)

Tech **| *Python, Flask, OpenAI API, Bing Search API, BeautifulSoup, Pandas, Azure Cognitive Services***

- Built an AI-powered **Customer Finder Tool** to identify high-value potential buyers in specific regions, leveraging **deep learning models** for intelligent lead generation and business expansion.
- Integrated **data scraping pipelines** from Bing Search and applied **OpenAI LLMs** to extract and analyze company profiles, business descriptions, and purchase intent.
- Designed advanced **filtering logic** to exclude competitors and highlight relevant prospects, delivering a curated list enriched with business intelligence insights.
- Deployed the application with a Flask-based interface for real-time querying and interactive results visualization.

IntelliSolve – Generative AI Product Recommendation Engine (Azure OpenAI + Flask)

Tech **| *Python, Flask, Azure OpenAI API, Bing Search API, LangChain, Pandas, Docker***

- Developed **IntelliSolve**, a generative AI-driven recommendation engine that gathers customer requirements and provides **personalized product insights** based on company datasets and query intent.
- Utilized **Azure OpenAI APIs** and **Bing Search** to retrieve and process structured product information including features, benefits, and application areas.
- Automated **response generation and summarization** using LLMs to deliver precise, context-aware product suggestions to business clients.
- Designed and containerized the entire solution for **scalable deployment** and integration into enterprise applications.

Certifications

- Certified Oracle Cloud Infrastructure Generative AI Professional (2025)
- Certified Oracle Cloud Infrastructure Data Science Professional (2025)
- Certified Oracle Cloud Infrastructure Generative AI Foundations Associate (2025)

Skills & Accomplishments

- Solved **900+ LeetCode** problems focusing on **Dynamic Programming, Graphs, and Trees**.
- Earned "**Outstanding Contributor**" recognition for optimizing production system uptime and throughput.
- Delivered 100% of product features **ahead of deadlines** while ensuring reliability across distributed systems.
- Strong foundation in **algorithms, system design, and large-scale distributed computing**