

Karthek Panyam

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EDUCATION

Arizona State University

Master of Science in Information Technology

Tempe, AZ

Expected May 2026

Sri Venkateswara University

Master of Computer Applications

Tirupati, India

May 2022

EXPERIENCE

Software Developer

May 2023 – Jul 2024

Accenture, India

- Led the re-architecture of a scalable service platform that processed **100K+ daily API requests**, improving **throughput by 3x** and achieving 99.9 percent uptime for client-facing systems.
- Owned the automation of deployment pipelines across multi-cloud infrastructure, reducing release cycles from weekly to daily and cutting **operational costs by 20 percent** through enhanced container utilization.

Software Engineer

Nov 2019 – May 2023

Infosys, India

- Designed and implemented high-availability backend services with modular microservice patterns, improving **deployment speed by 50 percent** and system scalability across enterprise environments.
- Developed asynchronous, event-driven data pipelines leveraging message queues and stream processing, boosting **system throughput by 3x** and maintaining **under 150 ms API latency** under high-traffic workloads.
- Implemented CI/CD pipelines and automated regression suites, reducing **release failures by 70 percent** and enabling consistent, daily production deployments.
- Refined database access logic and caching mechanisms, lowering **read/write latency by 60 percent** and reducing compute utilization through efficient query design and connection pooling.
- Engineered fault-tolerant service design and automated failover mechanisms, achieving **99.99 percent production uptime** and ensuring uninterrupted service continuity across distributed systems.
- Architected a large-scale log-analytics platform to aggregate and catalog system activity data, sustaining **over 1 million records per day** across parallel ingestion pipelines.
- Enhanced query performance and indexing logic, cutting **search response times by 3x** and enabling sub-second analytics on enterprise-scale datasets.

PROJECTS

Distributed Log Processing System | Kafka, FastAPI, PostgreSQL, AWS

- Developed a fault-tolerant event ingestion platform for real-time log analysis, maintaining **1M+ daily entries** through parallel data streams.
- Redesigned storage schema and query optimization layers, achieving **3x faster retrieval speeds** and supporting interactive analytics dashboards.

IoT Data Aggregation Platform | Node.js, Express, Redis, MongoDB, Docker

- Developed a real-time ingestion and monitoring service for simulated IoT devices, maintaining **<200 ms API latency** under concurrent workloads.
- Implemented Redis caching and WebSocket event updates, increasing **system throughput by 2.5x** while reducing backend compute usage.

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, Bash

Frameworks: FastAPI, Spring Boot, Node.js, Express

Cloud & Infrastructure: AWS, GCP, Docker, Kubernetes, Jenkins, GitHub Actions

Data & Messaging Systems: PostgreSQL, MongoDB, Redis, Kafka

Concepts: Distributed Systems, Microservices, Event-Driven Architecture, CI/CD, System Design, API Development

PROFESSIONAL ACHIEVEMENTS & CERTIFICATIONS

- Professional Achievements:** Received **INSTA Award** for exceptional performance and on-time delivery, and **SPOT Award** for outstanding client readiness and contribution during tenure at Infosys.
- Certifications:** AWS Certified Solutions Architect – Associate, Microsoft Azure Fundamentals (AZ-900), Google Cloud Associate Engineer.