

KALYANKUMAR KONDURU

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Work Experience

Medical Informatics Engineering

Jun 2025 - Dec 2025

Software Engineer Intern

- Implemented Model Context Protocol (MCP) chatbot in TypeScript with custom servers for Epic EHR, Aidbox FHIR, and MongoDB, providing AI-powered access to healthcare data systems
- Built and optimized Python service using ClinicalBERT from Hugging Face to generate query embeddings, enabling AI to route user requests to appropriate MCP servers (Epic, Aidbox, MongoDB) based on medical context
- Developed Kubernetes-native autoscaler controller in Go using CPU, memory, and latency metrics from Prometheus to dynamically scale deployments with configurable thresholds and cooldown periods
- Containerized autoscaler and dashboard with Docker, deployed to GKE using Helm charts with RBAC configuration, and deployed React frontend to Cloud Run with CORS-enabled proxy for cross-origin API communication
- Configured Prometheus scrape targets for custom metrics collection and built Grafana dashboards visualizing CPU, memory, and P95 latency trends across Kubernetes deployment replicas

Accenture

Jan 2022 - Dec 2023

Software Engineer

- Built Java Spring Boot microservices with Kafka for asynchronous messaging, Redis for session caching, and PostgreSQL for data persistence, deployed on AWS EC2 clusters
- Designed RESTful APIs in Spring Boot for transaction processing, optimized PostgreSQL queries using indexes and materialized views, and implemented connection pooling with HikariCP for database efficiency
- Developed high-performance REST APIs in Python using FastAPI with Redis caching layer, integrated PostgreSQL for data persistence, and enabled async request handling for concurrent processing
- Configured AWS EC2 instances with auto-scaling groups and load balancers for high availability, set up VPC networking with security groups, and established CloudWatch monitoring for application performance tracking
- Implemented OAuth 2.0 and JWT-based authentication using Spring Security, establishing role-based access control (RBAC) across microservices
- Documented RESTful APIs using Swagger and OpenAPI specification for both Spring Boot and FastAPI services, generated interactive API documentation for frontend integration, and maintained API versioning strategy for backward compatibility
- Led code reviews focusing on Spring Boot best practices and mentored team members on API design and microservices patterns

Accenture

Feb 2021 - Dec 2021

Associate Software Engineer

- Developed responsive product catalog and search interface in React with real-time filtering using React hooks, implemented shopping cart with local state persistence, and integrated Redux with middleware for state management
- Created reusable React component library with shared UI patterns, developed virtual scrolling for product listings to handle large datasets, and reduced bundle size by tree-shaking unused dependencies
- Built RESTful APIs using Node.js and Express with JWT authentication, implemented middleware for request validation and error handling, and integrated third-party payment gateway for transaction processing
- Configured MongoDB for storing user accounts and transaction data, created database indexes to improve search performance, and automated data recovery with backup scripts
- Created automated tests using Jest for React components and Node.js APIs, established GitHub Actions pipeline for continuous integration and deployment, and enforced code quality standards with ESLint
- Collaborated with QA and development teams to enhance test coverage and improve software quality for e-commerce platform using automated testing methodologies

Education

Purdue University Fort Wayne

Jan 2024 - Dec 2025

Master of Science, Computer Science

- GPA:** 3.8
- Coursework:** Database Systems, Software Engineering, Machine Learning, Operating Systems, Heuristic-Problem Solving

Skills

- Programming Languages:** Python, Java, JavaScript, Go, TypeScript
- Frameworks & Libraries:** Spring Boot, React, Node.js, Express.js, FastAPI, Redux
- Databases & Messaging:** PostgreSQL, MongoDB, Redis, Kafka
- Cloud & Infrastructure:** AWS, Docker, Kubernetes, Jenkins, GKE
- DevOps & Tools:** Git, Prometheus, Grafana, Jest, GitHub Actions