Chaitanya Swaroop Kumar Allu

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EDUCATION

University of Missouri - Kansas City Aug 2023 – May 2025
MS in Computer Science; GPA: 3.93/4.0 *Kansas City, MO*

PROFESSIONAL EXPERIENCE

University of Missouri - Kansas City May 2024 – Jan 2025
Software Engineer *Kansas City, MO*
- Led software development of a research data portal (www.kcjusticeinitiative.org) under Dr. Kotlaja Marijana, providing a centralized platform for violence prevention programs.
- Engineered and deployed high-throughput file management system using FastAPI, concurrent workers, and chunked streaming, reducing CPU and memory usage by 60%, supporting secure 25MB uploads/downloads.
- Designed and enforced fine-grained access control in 6 admin dashboards using ABAC, ReactJS, and FastAPI roles-based endpoints, ensuring secure, permission-aware UI rendering and state-aware component visibility.
- Created monitoring strategies using log aggregation and A/B testing techniques for portal reliability, aligning with accessibility and performance standards.
- Developed and maintained 20+ secure RESTful APIs for a platform with 5K+ active users, resolving key defects.

Wipro Technologies Sep 2021 – May 2023
Software Engineer *Telangana, India*
- Developed and maintained 15+ RESTful APIs using Java, Spring Boot, and Elasticsearch for transaction/account search, reducing average query latency from 1.5s to 1s across 50K+ daily requests.
- Boosted backend throughput by 30% via JPA query tuning and PostgreSQL indexing in financial workflows.
- Improved test coverage to 90% for auth modules using JUnit, Mockito, Cucumber, ensuring higher code reliability.
- Designed 10+ responsive ReactJS pages from Figma designs for user account management, enhancing UX.
- Investigated and resolved 20+ production issues using Elasticsearch, Logstash, Kibana, ensuring 99%+ uptime.
- Consistently delivered sprint goals across 6+ Agile iterations by collaborating with QA and DevOps teams.

PROJECTS

Distributed Book Management System | *Java, Spring Boot, REST APIs, Microservices, PostgreSQL, MongoDB*
Implemented a domain-isolated book system using multi-modules and REST APIs, applying microservices-style decomposition with layered architecture, clearly modularized business logic with efficient inter-service communication.

Real-Time Chat Application | *Golang, WebSockets, Redis, HTML/CSS, ReactJS, Chakra UI, A/B Testing, Remote Config*
Developed a real-time chat app supporting multiple rooms and user presence; implemented secure WebSocket communication, message caching with Redis, and used remote config for dynamic feature toggling and UI testing.

Car Resale Value Predictor | *Python, Data Analysis, Machine Learning, Scikit-learn, XGBoost, Pandas, NumPy*
Created an end-to-end ML pipeline on a 50k-record dataset for car resale value prediction, leveraging Random Forest and XGBoost ensembles; achieved 92% R^2 and reduced mean absolute error by 15% versus baseline.

SKILLS

Languages & Frameworks: Java, Go, Python, JavaScript, Swift, SwiftUI, UIKit, Spring Boot, ReactJS, FastAPI
Mobile & UI: iOS, SwiftUI, UIKit, CoreData, Accessibility, A/B Testing, Remote Config, State Management
Backend & Databases: PostgreSQL, MySQL, MongoDB, Redis, Elasticsearch, Kafka, GraphQL, Microservices
Cloud & DevOps: AWS (EC2, S3, RDS), GCP, Kubernetes, Docker, Git, Linux, Bash, GitHub, Jira
Testing & Monitoring: JUnit, Mockito, Cucumber, Postman, Performance Monitoring, ELK Stack
Software Engineering: Data Structures and Algorithms, System Design, Object-Oriented Design, Modular Architecture, Design Patterns, SOLID Principles
Soft Skills: Collaboration, Critical Thinking, Technical Growth, Communication, Innovation, Adaptability

PUBLICATIONS

Music Genre Classification Using Machine Learning Techniques: IJSREM, Vol. 07, Issue 12, Dec 2023