Kamal Poshala

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Technical Skills

Languages: Java, JavaScript, Python, C
Backend Engineering: Node.js, Express.js, REST APIs, Microservices Architecture, API Design, Middleware, JWT Authentication
Databases: MongoDB, MySQL, Indexing, Aggregation Pipelines, Query Optimization
Systems: Data Structures, Algorithms, OOP, System Design, Concurrency, Distributed Systems
DevOps: Git, CI/CD Pipelines, Linux, Cron Jobs
Frontend: React.js

Experience

Cotiviti India — Software Engineer Intern Jan 2024 – Jun 2024
Node.js, MongoDB, Microservices

- Delivered 12+ production-grade RESTful services processing 5K+ daily transactions in distributed backend architecture, increasing automation efficiency by 30%.
- Eliminated 40% of manual operational workflows by designing microservice-based internal platforms adopted across 3 engineering teams.
- Increased backend throughput by 35% via asynchronous processing models, database indexing strategies, and aggregation query tuning.
- Resolved 20+ high-priority production incidents through systematic debugging and root cause analysis, improving service availability to 99.8%.
- Partnered with DevOps teams to streamline CI/CD deployment workflows, reducing release cycle time and improving delivery reliability.

Persistent Systems — Software Engineer Intern Aug 2023 – Oct 2023
Java, Linux, Algorithms

- Developed performance-focused Java backend modules reducing execution time by 25% through memory optimization and algorithmic refinement.
- Implemented scalable data structure-driven solutions (HashMaps, Heaps, Graph traversal) for compute-intensive engineering tasks.
- Enhanced multi-threaded application stability by improving thread synchronization and CPU resource utilization.

Projects

Internship Program Management System (IPMS) Mar 2025 – Apr 2025
Node.js, MongoDB, Distributed Workflow

- Designed distributed role-based access control system with secure JWT authentication and fine-grained authorization.
- Implemented 15+ REST endpoints handling 1K+ transactional events with centralized logging, validation middleware, and structured error handling.
- Automated escalation and notification pipelines using cron-based schedulers, reducing approval turnaround time by 40%.
- Improved database query performance by 38% through indexing strategy design and aggregation pipeline restructuring.

CogniFetch — Search and Retrieval Engine Jan 2024 – May 2024
Node.js, MongoDB, NLP

- Engineered relevance-based document retrieval system leveraging TF-IDF ranking across 10K+ indexed academic documents.
- Designed OCR and NLP ingestion framework converting 2K+ unstructured PDFs into structured searchable collections.
- Reduced query latency by 45% via indexing optimization and efficient execution planning.

Education

University of Oklahoma Aug 2024 – May 2026
M.S. in Computer Science

CVR College of Engineering Aug 2020 – May 2024
B.Tech in Information Technology