Nischay Nanaiah Chettira Shambu

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Education

Indiana University, Bloomington Aug 2024 – May 2026
Master of Science in Computer Science | GPA: 3.67/4.0 *Bloomington, IN*
Relevant Coursework: Distributed Systems, Machine Learning, Cloud Computing, Advanced Algorithms

CMR University Aug 2017 – Jun 2021
Bachelor of Technology in Computer Science | GPA: 3.67/4.0 *Bengaluru, India*
Relevant Coursework: Data Structures, Operating Systems, Database Systems

Technical Skills

Languages: Python, JavaScript/TypeScript, Java, C#, SQL, C/C++
Frameworks: Node.js/Express, FastAPI, React, Flask, Angular, Socket.IO
Cloud/DevOps: AWS (Lambda, S3, Glue, SageMaker, ECS/EKS), Docker, Kubernetes, Terraform, Render, Vercel
Databases: MongoDB, PostgreSQL, Microsoft SQL Server
Tools: Git, Github, Postman, Figma, Jest/Selenium, Plotly, Folium

Experience

PM Accelerator (Dr. Nancy Li International) | ***Software Engineer Intern — AI/ML (Tallahassee, FL)*** Jun 2025 – Aug 2025

- Architected a full-stack mock interview platform with Node.js and React, deploying high-performance RESTful APIs optimized for processing large video and transcript files, cutting API response time by over 40%.
- Developed a secure, end-to-end data encryption and key management utility that safeguarded over 1000 sensitive user records, ensuring compliance and data integrity while enabling one-click, secure retrieval for user data management.
- Enhanced the RAG pipeline by implementing a data preprocessing algorithm that accurately classified user questions and follow-up queries, boosting context retrieval accuracy by 15%.

The Alacer Group | **Senior Software Engineer** ***(Bengaluru, IN)*** Mar 2022 – Jul 2024

- Led the full-cycle delivery of a client-facing .NET Core web platform, architecting a microservices-based architecture and optimizing backend services to improve development efficiency by 25%.
- Redesigned banking workflows by implementing a rules-based engine for custom forms with real-time validations for over 300 user-based questions, increasing customer engagement and task completion rates by 30%.
- Optimized a high-volume transactional database by implementing full-text indexing in SQL Server, reducing search latency by 80% and improving responsiveness for customer support teams.
- Developed a C# and SQL-based solution for a wildcard search utility which improved customer-lookup accuracy by 50%.
- Mentored and collaborated with a team of 5 junior developers, conducting regular code reviews and knowledge transfer.

The Alacer Group | **Software Engineer Intern** ***(Bengaluru, IN)*** Mar 2021 – Mar 2022

- Built a robust KYCR risk-evaluation engine which employed score-based mathematical functions to achieve 100% validation accuracy.
- Shipped 5 client-requested features within sprint cycles through close collaboration with analysts and QA.
- Designed a data analytics dashboard with JavaScript, providing employees with real-time visibility into over 500 daily alerts and cases to streamline case management.

Projects

CuraSure — Hospital & Insurance Management Platform | ***Node.js, React, Duo MFA, Docker, Render*** 2024 – 2025

- Engineered a 6-microservice-based Health Insurance & Patient Management System with Duo MFA and automated tests.
- Containerized and deployed services with Docker on Render, successfully load-tested to support 500+ concurrent users.
- Implemented a role-based, real-time chat using Socket.IO and MongoDB, improving inter-departmental communication efficiency.

Real-Time Football Analytics | ***AWS Lambda, SQS, DynamoDB, ECS/EKS*** Apr 2025

- Built a serverless ETL pipeline (Lambda → SQS → DynamoDB → ECS/EKS) ingesting 3 public APIs for live match KPIs.
- Deployed auto-scaling ECS/EKS services processing 10K+ events/minute with sub-200ms latency.
- Established centralized log aggregation with CloudWatch and implemented DLQ-based error handling for fault tolerance.

F1 Telemetry Logger | ***Docker, Python, Kubernetes, Distributed Systems*** May 2025

- Kubernetes-scaled, 5-node time-series pipeline simulating realistic tire, engine, and brake telemetry patterns.
- Dockerized client-server architecture streaming >500 telemetry data points in real time to centralized dashboards.
- Configured PostgreSQL logical replication for fault-tolerant distributed data aggregation.