Goutham Raju Kosuru Srinivasa

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Education

Arizona State University, Tempe, AZ — Dec 2025
Master of Science in Information Technology — **GPA: 4.0/4.0**

Technical Skills

Languages: Python, Java, JavaScript/TypeScript, C#
Framework/Backend: React.js, Angular, Next.js, .NET Core, Node.js, FastAPI, Django, REST APIs, Microservices
Cloud/DevOps: AWS (Lambda, EC2, S3, DynamoDB), Azure (App Services, SQL, DevOps), Docker, CI/CD
Data/ML: TensorFlow, PyTorch, LangChain, SQL/NoSQL (MySQL, MongoDB, DynamoDB), Pandas, NumPy

Experience

Neudesic (An IBM Company) — Associate Software Engineer — Apr 2022 – Nov 2023
Tech: .NET Core, Angular, React.js, Next.js, TypeScript, Azure, Node.js, REST APIs, xUnit, Jest

- Worked as a full-stack engineer on a large-scale field-service platform, contributing to both the **web application and its hybrid mobile app** by building Angular frontend features and supporting .NET Core backend APIs, used by **2,000+ daily active users**.
- Implemented and maintained a **Next.js backend-for-frontend (BFF)** layer connecting Angular with .NET Core microservices, improving data handling, API efficiency, and front-end integration.
- Designed and optimized REST APIs, SQL queries, and distributed microservices using Azure App Services and sharded Azure SQL, improving system throughput and backend reliability.
- Built reusable **TypeScript UI components** and occasional **React.js modules** for internal tools, standardizing UI patterns and reducing development overhead across teams.
- Improved application responsiveness by refining caching strategies (Redis), reducing redundant API calls, and tuning data-processing logic, resulting in lower page-load latency.
- Developed CI/CD pipelines in Azure DevOps using YAML automation, improving deployment consistency and stability across development, staging, and production environments.
- Increased engineering quality by expanding automated test coverage from **25% to 75%** using xUnit and Jest, and integrating distributed tracing with Azure Application Insights to accelerate debugging and issue resolution.

The Sparks Foundation — Software Engineer Intern — Aug 2021 – Oct 2021
Tech: AWS CDK, Lambda, API Gateway, DynamoDB, Python, Docker, CloudWatch

- Developed a **serverless transaction monitoring API** using AWS Lambda, API Gateway, and DynamoDB with event-driven architecture, handling high-volume concurrent requests with consistent low-latency performance.
- Automated **infrastructure provisioning with AWS CDK** (Infrastructure-as-Code), integrated with CodePipeline and CodeBuild, reducing **environment setup time from 2 hours to under 20 minutes**.
- Containerized services with **Docker** for reproducible builds and CI integration, improving deployment consistency across development, staging, and production environments.
- Configured CloudWatch alarms and structured logging for **real-time monitoring and automated alerting**, improving fault tolerance during concurrent Lambda invocations.

Projects

Multi-Agent AI Workflow Automation Platform — Aug 2025
Tech: AWS Bedrock, SageMaker, LangChain, CrewAI, FastAPI, React.js, FAISS

- Designed an intelligent workflow system using **LangChain and CrewAI** for **autonomous data extraction, summarization, and decision-making** across enterprise datasets.
- Integrated **AWS Bedrock and SageMaker** for distributed inference, building a FastAPI backend with **FAISS vector databases** for semantic search.

Book Recommendation System — Dec 2024
Tech: Python, Pandas, NumPy, SciPy, Collaborative Filtering

- Built a **collaborative filtering engine** using cosine similarity on sparse user-item matrices (**60K+ records**) with SciPy operations for memory-efficient computation.
- Designed **ETL pipelines** with pandas optimizing similarity computation using NumPy vectorization and caching for **real-time recommendations**.

Reader and Object Detector for the Visually Impaired — Jul 2022
Tech: Python, TensorFlow, YOLO, OpenCV, Tesseract OCR, Raspberry Pi, Text-to-Speech

- **Co-authored published research paper** on assistive AI using **real-time object detection** and text-to-speech.
- Developed end-to-end computer vision system using **YOLO and Tesseract OCR** on Raspberry Pi.
- Optimized inference pipeline achieving **15+ FPS on embedded systems** through GPU acceleration.

Certifications & Publications

"Reader and Object Detector for Blind" - *International Research Journal of Modernization in Engineering Technology and Science (IRJMETS)*, Volume 04, Issue 07, July 2022 — **Impact Factor: 6.752**
Co-author: Research on real-time assistive AI systems using computer vision and deep learning