

Tharun Chowdary Mannam

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SUMMARY

MS Computer Science graduate (ASU, 2026) with 2+ years of software engineering experience across full-stack development, cloud services, and AI-powered systems. Proficient in Python, Java, and TypeScript; experienced with REST APIs, microservices architecture, CI/CD pipelines, Docker, Kubernetes, and AWS/GCP. Proven record of shipping production systems end-to-end with strong emphasis on code quality, testing, and system design.

EDUCATION

Arizona State University

Master of Science in Computer Science | GPA: 3.73/4.0

Tempe, AZ

Aug 2024 – May 2026

KL University

Bachelor of Technology in Computer Science and Engineering | GPA: 9.22/10

Vijayawada, India

June 2019 – May 2023

EXPERIENCE

Vosyn

Software Engineering Intern

Remote, USA

June 2025 – Dec 2025

- Designed and developed Python backend microservices for media ingestion and transformation via REST APIs, improving processing versatility by 30%; wrote unit and integration tests validating pipeline correctness across concurrent workloads.
- Deployed and optimized cloud services on GCP Vertex AI with Cloud Run serverless functions in agile sprint cycles, cutting execution time by 25% and latency by 20%; implemented structured logging and monitoring for production observability.
- Built a speech-to-speech microservice pipeline integrating Faster Whisper transcription and Speaker Diarization; collaborated with senior engineers through code reviews and design discussions, boosting speaker identification accuracy by 15%.

NCR Corporation

Software Engineer 1

Hyderabad, India

May 2023 – July 2024

- Designed and maintained backend services and Azure cloud infrastructure, provisioning 50+ VMs and 40+ resource groups using Bash and ARM templates (IaC), reducing system downtime by 20%.
- Built a Python/Bash VM provisioning tool end-to-end owning the full SDLC from design to delivery; accelerated deployment cycles by 30% via Ansible and Jenkins CI/CD integration, contributing 30% to a major product milestone.
- Optimized Jenkins CI/CD pipelines with Docker, resolving 25+ pipeline failures and 10+ container issues through systematic debugging; improved throughput by 40% and authored runbooks and documentation for recurring issues.

VISA Lab, Arizona State University

Research Volunteer

Tempe, AZ

May 2025 – Dec 2025

- Configured and debugged FaaSFlow distributed serverless framework; authored Bash automation scripts and step-by-step documentation for reproducible OpenFaaS/Prometheus/Grafana deployment used in ongoing lab research.

Holoworld

SDE Intern

Mysuru, India

May 2022 – May 2023

- Owned end-to-end development of production modules in Unity (C#) using OOP design patterns and Dynamic Programming; debugged Android performance issues and shipped to Google Play (ARCore) and iOS (ARKit) for 5,000+ users.

PROJECTS

Travelcation – Travel Booking Platform | Python, Django, React, TypeScript, PostgreSQL, REST APIs

- Built a full-stack web app with a Django REST backend and React/TypeScript frontend supporting reservations across 200+ locations for 500+ concurrent users; applied MVC design patterns and TDD throughout development.
- Designed a normalized PostgreSQL schema with ORM-based data access, implemented REST APIs with authentication, and wrote unit and integration tests using pytest validating end-to-end booking workflows.

Distributed Face Recognition Cloud Application | AWS, Python, Docker, PyTorch, REST APIs

- Architected a scalable multi-tier distributed cloud application on AWS supporting IaaS and serverless deployments, processing 100 concurrent requests at sub-second latency with 100% accuracy with IAM security per service.
- Built a custom Python autoscaling controller scaling EC2 workers (0–15) from SQS queue depth and a containerized serverless inference pipeline using AWS Lambda and PyTorch models on ECR.

RECRUITZ – Placement Management System | Java, Spring Boot, Spring Data JPA, MySQL, JUnit

- Architected a full-stack enterprise web application with OOP design patterns, Spring Boot, and Spring Data JPA (ORM) against a relational MySQL schema for 1,500+ records across Admin, Student, and Recruiter modules.
- Implemented skill-based job matching with modular Java services; wrote JUnit unit tests and performed end-to-end regression testing, earning 1st place in a college hackathon.

TECHNICAL SKILLS

Languages: Python, Java, Go, C, C++, C#, JavaScript, TypeScript, SQL, Bash

Frameworks & Libraries: Django, FastAPI, Spring Boot, React, Node.js, PyTorch, NumPy, Pandas, Spring Data JPA, pytest, JUnit, Selenium

Cloud & Tools: AWS, Azure, GCP, Docker, Kubernetes, Jenkins, Ansible, GitHub Actions, CI/CD, Git, Linux, Prometheus, Grafana

Databases & Concepts: PostgreSQL, MySQL, MongoDB, Oracle, REST APIs, OOP, Design Patterns, TDD, Agile/Scrum, SDLC, Microservices, Distributed Systems, System Design