AMOGH JAGADISH TAMBAD

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EDUCATION

Master of Science, Computer Science May 2025
Arizona State University, Tempe, AZ 4.00 GPA
Coursework: Cloud Computing, Data Processing at Scale, Data Mining, Software Security

Bachelor of Technology, Computer Science May 2021
REVA University, Bangalore, KA 3.77 GPA
Coursework: Data Structure and Algorithms, Operating Systems, Cloud Computing, Computer Networks

SKILLS

Programming Languages: Python, C++ Go, Java, JavaScript, Typescript, Scala, HTML, XML
LLM/GenAI Frameworks: MCP, LangChain, LangGraph, RAG, VectorDBs (FAISS, ChromaDB)
Technologies: AWS (EC2, Lambda, S3, ECS, CloudFormation, EKS, ECR), Pandas, Numpy, Spark, Docker, Kubernetes, React, Angular, Flask, Node.js, Terraform, Jenkins
Database Systems: SQL(MySQL, PostgreSQL), NoSQL (MongoDB)
Tools: Linux, Git (Version Control), Github, Nginx, Kafka, Redis, Prometheus, Postman, Cursor, CoPilot, Claude Code
Miscellaneous: Distributed Systems, RESTful APIs, Microservices Architecture, Object-Oriented Programming, Agile, Test Driven Development (TDD), Infrastructure-as-code, Cloud Infrastructure, Communication Skills, Collaboration, Writing

WORK EXPERIENCE

Research Assistant, VISA Lab Jun 2025 - Present
Arizona State University, Remote

- Developed **FlowBench**, a workflow-based distributed benchmark by leveraging **Python**, **Docker**, **Kubernetes**, and FaaS principles to evaluate custom edge computing applications, providing a comprehensive report on 6+ metrics.
- Built and tested a video analytics workflow via **OpenCV** on a containerized microservices architecture with Kubernetes, processing 10,000+ frames per minute.

Software Engineer Intern Jun 2024 - Aug 2024
Arch Mortgage Insurance, Greensboro, NC

- Built a **JavaScript** and **Cribl Stream** based scalable data processing solution and created 10+ conditional pipelines for log filtering and transformation, implementing custom business logic to filter and route logs from **OpenShift** pods to Splunk
- Engineered a container image synchronization system through **Ansible** automation scripts and **Red Hat registry** APIs that integrates with **Nexus Repository** for artifact management, eliminating 90% of manual update processes

Software Engineer May 2021 - Jul 2023
Cerner Healthcare, Bangalore, KA

- Designed cloud migration scripts and data transformation pipelines to migrate 80% of enterprise data from on-premises infrastructure to AWS, thereby enhancing access flexibility, security, and cost-efficiency
- Automated the monitoring and alerting systems with **Zabbix** and **Splunk** APIs, developing custom dashboards and incident response automation that sped production resolution by 30%
- Troubleshot and resolved **Jenkins** pipeline issues, minimizing support ticket resolution time by **40%** and ensuring **99.9%** uptime for **CI/CD** workflows, leading to uninterrupted deployment pipelines
- Automated deployment orchestration for **300+** bi-weekly microservice releases, tracked via **JIRA**, through **Chef** configuration management and custom deployment scripts, accelerating delivery of new UI and backend features

PROJECTS

RAG Implementation for arXiv Papers Nov 2024

- Devised a multimodal data processing pipeline using **Python** to extract and vectorize content from **2000+** arXiv papers, implementing **CLIP** and text embedding models, **DynamoDB** indexing and vector database storage
- Implemented a similarity search and summarization pipeline with DynamoDB and GPT-4o mini to deliver concise, contextually relevant responses to user queries with an average response time of under **2 seconds**.

AWS-Based Face Recognition App May 2024

- Created and deployed a scalable **Flask** web application using **Python** and **Gunicorn** on **AWS EC2**, implementing HTTP-based image uploads through asynchronous processing pipeline leveraging **S3** storage and **SQS** message queuing
- Architected an **auto-scaling** infrastructure that dynamically scales up to 20 EC2 instances based on SQS queue depth metrics, ensuring optimal performance and cost-efficiency for real-time image processing under variable workloads