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

PROFESSIONAL EXPERIENCE

Research Assistant, VISA Lab — Jun 2025 - Present
Arizona State University, Remote
- Developing **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.

Software Engineer (Infrastructure & Reliability) 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, decreasing Splunk utilization by 30% and improving search speed.
- 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 (Systems) — May 2021 - Jul 2023
Cerner Healthcare (Oracle Cerner), Bangalore, KA
- Designed cloud migration scripts and data transformation pipelines to migrate 80% of enterprise data from on-premise 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%
- Implemented **RBAC** with AWS IAM and Zabbix User roles, enhancing security and reducing login errors by 60%, while streamlining user access management across the system.
- Deployed **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

JobTrail - Go-based Job Tracker — May 2025
- Developed a full-stack job tracking application using **Go** backend (Gorilla Mux), **SQLite** database, and **JavaScript** browser extension, reducing manual job application logging time by 80% through automated data capture from 5+ major job boards

RAG Implementation for arXiv Papers — Nov 2024
- Devised a multimodal 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

SKILLS

Languages & Database: Python, C++, Go, Java, JavaScript, Typescript, HTML, CSS, SQL(MySQL, Postgres), NoSQL (MongoDB)
Tools: Linux, Unix, Git (Version Control), Pandas, Numpy, Spark, Jenkins, ArgoCD, Nginx, Kafka, Redis, Prometheus, Cursor
Cloud Technologies: Docker, Kubernetes, Terraform, Helm, AWS(EC2, S3 Lambda, ECS, CloudFormation, EKS), GCP
Web Frameworks: Flask, FastAPI, Gorilla Mux, Node.js, Spring Boot, React.js
AI/ML Frameworks: PyTorch, TensorFlow, MCP, LangChain, LangGraph, RAG, VectorDBs (FAISS, ChromaDB)
Miscellaneous: Distributed Systems, RESTful APIs, Microservices, Object-Oriented Programming, Agile, Data Structures