# 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, India

3.77 GPA

Coursework: Data Structure and Algorithms, Operating Systems

#### PROFESSIONAL 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.

# Site Reliability Engineer (SRE) Intern

Jun 2024 - Aug 2024

Arch Mortgage Insurance, Greensboro, NC

- Filtered and routed logs from OpenShift Kubernetes clusters to Splunk using Cribl Stream pipelines, reducing daily Splunk data ingestion by 40–50 GB and improving log search performance by 20%
- Designed an automated pipeline using Ansible and Red Hat registry APIs to sync updated catalog images to Nexus Repository, reducing manual update time by 90%

System Engineer - 1 May 2021 - Jul 2023

Cerner Healthcare (Oracle Health), Bangalore, India

- · Migrated 80% of data from on-prem to AWS, enhancing data access flexibility, security, and cost-efficiency
- Participated in regular on-call rotations with cross-functional teams, leveraging Zabbix and Splunk for system health monitoring, quality assurance, and resolving production alerts, maintaining 99.99% service reliability
- Troubleshot and performed root cause analysis **Jenkins** pipeline issues, minimizing support ticket resolution time by **40**% and ensuring **99.9**% uptime for **CI/CD** workflows, leading to uninterrupted deployment pipelines
- Managed 300+ bi-weekly microservice deployments, using Chef, while also tracking them with JIRA, accelerating delivery of new UI and backend features in a fast-paced production environment

## **ACADEMIC PROJECTS**

## **End-to-end Deployment Automation**

Apr 2025

- Integrated **Terraform**, **Ansible**, with **Jenkins**, and **GitHub Actions** based CI/CD pipeline to provision AWS EC2 instances and deploy web services within **1 minute** of version control changes
- Optimized CI/CD pipelines to dynamically retrieve instance IPs, configure secure SSH access, and deploy services, eliminating manual intervention and resolving **IAM** and resource issues in production-like environments

## **AWS-based Face Recognition App**

May 2024

- Developed and deployed a **Flask**-based image recognition app using **Gunicorn** on AWS EC2, enabling HTTP REST API based uploads and forwarding images to **S3** via **SQS** for asynchronous processing using AWS service API.
- Designed an auto-scaling app tier that scaled up to 20 EC2 instances based on SQS queue depth, ensuring efficient, real-time image processing under varying workloads

# **Kubernetes-based Data Processing Pipeline**

Nov 2024

• Engineered a highly scalable data processing pipeline using **Apache Kafka** and **Neo4j** that processes **100,000+** NYC taxi records in near-real-time, reducing spatial analytics query time by **60%** and enabling real-time traffic pattern identification

### **SKILLS**

Languages: Python, C++ Go, Java, JavaScript, Typescript, Scala, HTML, XML

Cloud Technologies: AWS (EC2, Lambda, S3, ECS, CloudFormation, EKS, ECR, CloudWatch), TensorFlow, Docker, Kubernetes, Terraform, Jenkins, Github Actions, GCP

**Tools:** Linux (RHEL, Ubuntu), Unix, Git (Version Control), Bash, Github, Ansible, Chef, Gitlab, Prometheus, Grafana, Postman **Miscellaneous:** Distributed Systems, RESTful APIs, Microservices, Object Oriented Programming, Agile, Test Driven Development (TDD), Infrastructure as code (IaC), DevOps, Cloud Infrastructure, Collaboration, Writing