# Amogh Jagadish Tambad

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#### **EDUCATION**

Master of Science, Computer Science

May 2025 GPA: 3.96/4

Arizona State University

Relevant Coursework: Cloud Computing, Data Processing at Scale, Data Mining, Data Visualization

Bachelor of Technology (B.Tech), Computer Science and Engineering

May 2021

REVA University, Bangalore, India

Relevant Coursework: Data Structures and Algorithms, Computer Architecture, Operating Systems.

GPA: 8.93/10

#### **SKILLS**

- Languages: Python, C++, Bash, C, SQL, Scala, HTML, Java, JavaScript, Groovy.
- Tools and Technologies: AWS (EC2, ECR, SQS, S3, Lambda, SNS), Git, Jenkins, Kafka, Spark, Heroku, Azure, Splunk, Zabbix, Docker, Kubernetes, PostgreSQL, MongoDB, GitHub Actions, Cribl, OpenShift.
- Libraries and Frameworks: PyTorch, TensorFlow, Flask, OpenCV, Pandas, Keras, scikit-learn, Nginx, React, Node, js.

#### **EXPERIENCE**

#### IT-Infrastructure-Platform/SRE Intern

Jun 2024 - Aug 2024

Arch Mortgage Insurance, Greensboro, North Carolina

- Filtered logs and events going from OpenShift Kubernetes Clusters to **Splunk** using **Cribl**, reducing Splunk storage utilization by **40-50 GB/day** with **20%** increase in search time.
- Improved readability of Splunk logs with Cribl's Parser and Mask functions, resulting in a concise, easily searchable '\_raw' field.
- Worked with **OpenShift** to manage container-based applications in the **Kubernetes** environment.

#### System Engineer - 1

May 2021 - Jul 2023

Oracle Cerner, Bengaluru, India

- Engaged with the software development team on Splunk upgrades, troubleshooting, and deployments, ensuring up-to-date servers.
- Migrated 80% data from On-prem to AWS, making access to data more flexible, secure, and inexpensive.
- $\bullet \ \ \text{Integrated } \textbf{Jenkins} \ \ \text{and } \textbf{GitHub} \ \ \text{to maintain important documentation and test merge requests for semantic errors}. \\$
- Performed CI/CD and 300+ bi-weekly micro-service deployments for web applications to deploy new UI and backend features.
- Managed and tracked over 10 projects and 400+ tasks to completion through **JIRA**, resulting in smooth and error-free delivery.

## **PROJECTS**

## Kubernetes based Data Processing Pipeline

Oct 2024 - Nov 2024

Arizona State University, Tempe, Arizona

- Built a highly scalable and available data processing pipeline that allows near-real-time processing and analytics of NYC Taxi Rides based spatial document stream data.
- Managed Kubernetes deployments of Kafka, Zookeeper, Kafka-Connect, and Neo4j components.
- Tested the pipeline using a document stream as input and performed PageRank and Breadth-First Search(BFS) algorithms on the resulting neo4j graph database, establishing individual and relative importance of locations.

#### AWS Based Live Face Recognition App

Feb 2024 - May 2024

Arizona State University, Tempe, Arizona

- Built a web application using Flask API and Gunicorn server that takes image files as input, performs image recognition, and outputs predictions.
- Created web tier using an AWS **EC2** instance that receives images via **HTTP POST** requests and forwards them to AWS **SQS**.
- Designed an **auto-scaling** app tier that spawns upto **20** EC2 instances based on number of requests in SQS with each of the instances performing image recognition.
- Stored the predictions in S3 buckets and sent them back through the web-tier, keeping the overall latency at under 3 minutes for 50 concurrent requests.

## Novel Object Detection Using Reasoning by Elimination

Aug 2023 - Dec 2023

Arizona State University, Tempe, Arizona

- Engineered a system with PyTorch to detect 'novel' objects not included in training data.
- Leveraged pre-trained ResNet-18 and BERT Tokenizer models to extract features.
- Computed Cosine similarity and trained the agent with reinforcement learning to eliminate seen objects.
- Generated an automobile-relevant, real-world dataset of 1260 images using **Stable Diffusion**.