

Komal Venugopal Vattumilli

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Education

Master of Science in Computer Software Engineering

Aug 2023 – Dec 2024

San Jose State University, United States of America

GPA: 4.00/4.00

Activities: Graduate Research Assistant (**GenAI**), Web Developer (ISO), Adobe Student Ambassador, iSucceed Peer Mentor

Bachelor of Technology in Computer Science Engineering

Jun 2017 – May 2021

Vellore Institute of Technology, India

GPA: 4.00/4.00

Technical Skills

DevOps: Linux, Jenkins, Terraform, Docker, Kubernetes, ArgoCD, Istio, GitLab CI/CD, Ansible, Git, Jira

Technologies: Python, GoLang, Java, C++, Groovy, Bash, Flask, Kafka, Spark, Airflow

Cloud & Databases: Amazon Web Services (AWS), Microsoft Azure, MySQL, MongoDB, Redis, Cassandra

Observability tools: CloudWatch, Splunk, Nagios, Prometheus, Grafana, Datadog, ELK, PagerDuty, Newrelic

Experience

Software Engineer Intern | Salesforce

May 2024 – Present

- Built a **Java** service using **Elasticsearch**, **Splunk** to monitor 1,000+ gate values with **gRPC** across multiple data centers, improving visibility by 90% and implemented testcases using **Mockito**.
- Designed Responsive **ReactJS** dashboards using **Chart.js** for interactive data visualization & deployed it using **Jenkins**.
- Automated remediation actions on servers using **Python3**, **React.js** and deployed them as Kubernetes pods in AWS. Utilized Grafana monitoring and integrated ML models to predict failures, boosting uptime by 65%.
- Implemented a **distributed system** framework in **Java** for metadata management across MySQL, AWS S3, Alicloud parallel to on-premises servers (FS3). Employed Terraform and Ansible for Infrastructure as Code (IaC).

Software Engineer | Headout

Mar 2023 – Jul 2023

- Templatized **Helm charts** for multiple namespaces, stored deployment status in Redis and used **ArgoCD** and **Istio** for deployment scaling and load balancing, reducing deployment times by 40%.
- Initiated the establishment of a **Jenkins** server on Amazon Elastic Kubernetes Service (EKS), streamlining the deployment pipelines for **multiple micro-services** and improved build times by 24%.
- Developed a **Golang**-based **Kubernetes** controller for orchestrating CRDs, enhancing cluster efficiency and dynamic resource management through concurrency and the client-go library.
- Managed **AWS security groups**, and network connectivity and conducted regular vulnerability scans to ensure timely identification of security threats.

Software Engineer | Jivox Corporation

Jan 2021 – Mar 2023

- Led transition from manual configuration and resource management to automated infrastructure provisioning using **Terraform**, **Ansible**, and **Python** reducing TAT by 30%.
- Developed a Spark Streaming application to push messages from **Kafka to AWS S3** and **Snowflake** using AWS EMR and Glue, and utilized Jenkins for automated deployments of the Kubernetes pods.
- Developed **Apache Airflow** job for Cloudinary asset management & integrated Snowflake resulting in 25% cost reduction.
- Enhanced **MySQL** and **MongoDB** management with performance tuning, replication, and robust backup processes, ensuring high data integrity and system scalability.
- Handled **AWS private cloud infrastructure**, implementing optimizations that resulted in monthly savings of \$1,500.
- Actively oversaw the centralized logging and monitoring solutions using **ELK Stack**, **Datadog** resulting in improved incident response times and 25% reduction in log processing time.
- Received 3 Spot **Awards** and mentored 20+ undergrad interns to complete AWS Certifications and monitored their progress.

Machine Learning Intern | Efftronics Systems Pvt Ltd

May 2019 – Jun 2019

- Created a **MERN Stack** application to monitor traffic at different junctions of city utilizing Microsoft Vision API.
- Utilized **Microsoft Azure ML Studio** to implement advanced Linear, Exponential, and Random Forest models, accurately forecasting green time and facilitating traffic diversions that led to a 20% decrease in traffic congestion in specific locations.

Projects

Research Publications: [Smart Guidance System for Blind](#) | [Program Slicing Techniques](#)

1. Face Mask Detection(Publication): Engineered a full-stack web application to monitor mask compliance in public spaces; integrated AWS SNS and Lambda for instant alerts and global optimization using CloudFront.

2. Immigpt(Website): Developed a web portal with React, Node.js, DynamoDB, Python, AWS, GCP, ML, and LLM to simplify immigration workflows, reducing response times by 50% and boosting user satisfaction by 60%.

Achievements

Hackathons: Stanford TreeHacks (**GenAI**) | Won Headout-AI Hackathon (LLM Chatbot) | RunnerUp Jivox Byte Riot Hackathon

Works: JPMC Virtual Internship | Adobe Student Ambassador | Research fellowship by Govt of India | [SoCalledHappenings](#)

Certifications: AWS Certified Solutions Architect Associate, Azure-900, Certified Kubernetes Administrator (CKA)