

Komal Venugopal Vattumilli

☎ (314) 201-5405 | ✉ komalvenugopal.vattumilli@sjsu.edu | [in LinkedIn](#) | [globe Portfolio](#) | [GitHub](#) | 📍 Bayarea, CA 95113

Education

Master of Science in Computer Software Engineering

San Jose State University, United States of America

Aug 2023 – May 2025

GPA: 4.00/4.00

Bachelor of Technology in Computer Science Engineering

Vellore Institute of Technology, India

Jun 2017 – May 2021

GPA: 4.00/4.00

Coursework: Teaching Associate (Python), Distributed Systems, Database Systems, Web UI/Design, Object Oriented Programming, Computer Networks, Data Mining, Data Visualization, Machine Learning, Natural Language Processing

Experience

Software Engineer Intern | Salesforce

May 2024 – Present

- Architected and implemented a scalable monitoring system using **Golang gRPC** APIs to track 100K+ gates in real-time, leveraging Elastic Search and **Splunk** for data aggregation and analysis.
- Built slack bot using **Python** Bolt app to automate remediation actions on servers using **Linux bash** scripting and deployed in Kubernetes. Integrated Random Forest ML model to predict future downtimes.
- Enhanced high-performance hybrid cloud storage solution integrating on-premises data centers to AWS S3 leveraged RDMA networking for low-latency data transfer and optimized for AI workloads.
- Implemented PyTorch-based intelligent data placement algorithms, reducing storage costs by 25% and improving ML model training speeds by 40%.

Research Assistant | San Jose State University

Nov 2023 – Present

- Developed storybook automation system using PyTorch, GANs, LLM, RAG, OCR, and TTS to generate dynamic storybooks and narrative videos for children, integrating AWS services (Bedrock, Sagemaker) for providing context-driven responses.

Software Development Engineer | Headout

Mar 2023 – Jul 2023

- Developed an asynchronous scalable report generation microservice using **Spring Boot**, GraphQL and integrated with secure OAuth 2.0 authentication via AWS API Gateway, Cognito, Lambda authorizer.
- Deployed the services in Kubernetes and automated deployments using ArgoCD, Istio and setup Grafana dashboards.
- Implemented serverless caching using CloudFront, Memcached, and AWS Global Accelerator reducing latency by 65%.
- Adopted DevOps principles by implementing **Jenkins CI/CD**, and maintained monitoring using **Grafana**, ELK stack.

Software Development Engineer | Jivox Corporation

Jan 2021 – Mar 2023

- Built Airflow pipelines for report generation using EMR, **Java Spark** to push data from **Kafka** to AWS S3 & Snowflake.
- Created 30+ reusable **React** components and used Tailwind CSS, Redux, and Axios to reduce development time by 70%.
- Optimized database queries and implemented **PostgreSQL** views, reducing REST API response times by 80%.
- Optimized **Golang** service & employed planned autoscaling strategies with EC2, EFS, and Nginx to maintain 98% uptime.
- Employed **Terraform** and Ansible for IaC and trained 20+ juniors in AWS and received 3 spot **Awards**.

Software Development Engineer Intern | Efftronics Systems Pvt Ltd

May 2019 – Jun 2019

- Created a **MERN Stack** application using websockets to monitor traffic at different junctions integrating GMaps.
- Analyzed image data from CCTV to train YOLO-based model using NVIDIA GPU for extracting vehicle count by converting to PCUs. Performed Linear, Exponential, and Random Forest models to predict green time with a min 0.06 RMSE value.

Technical Skills

Languages: Java, Python, C++, HTML, CSS, JavaScript, TypeScript, MySQL, PostgreSQL, Bash

Skills: AWS, Spring Boot, Node.js, ETL (Kafka, Spark, MongoDB), Flask, React, JUnit, Agile

DevOps: Git, Docker, Kubernetes, Jenkins, Ansible, Linux, Datadog, ELK, Grafana

Projects & Achievements

1. **Face Mask Detection (Publication):** Engineered a MERN stack web application to monitor mask compliance using ML models and integrated AWS SNS, Lambda for instant alerts and Cloudfront for global access.

2. **Immigpt:** Webscraped multiple sites with Selenium and developed a web portal using React and SpringBoot to address immigration-related questions through an LLM chatbot and implemented collaborative filtering for personalized recommendations.

- **Hackathons:** Stanford TreeHacks (**Mental Health - ML, GenAI**) | Won Headout-AI, Jivox Hackathons (BERT Chatbot)
- **Certifications:** AWS Certified Solutions Architect Associate, Azure-900, Certified Kubernetes Administrator (CKA)
- **Works:** JPMC Virtual Internship (Django, Python) | Adobe Student Ambassador | Research fellowship by Govt of India