Komal Venugopal Vattumilli

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Education

Master of Science in Computer Software Engineering   Aug 2023 − May 2025
San Jose State University, United States of America

Bachelor of Technology, Computer Science   Jul 2017 − Aug 2021
Vellore Institute of Technology   GPA: 4.00/4.00

Technical Skills

Tech Stack: Python, Java, Go, Bash, Groovy, C, C++, JavaScript, TypeScript, HTML, CSS, React, Node.js
Cloud & Databases: Amazon Web Services (AWS), Microsoft Azure, SQL, MySQL, PostgreSQL, Redis, Kafka
Automation & Version Control: Terraform, CloudFormation, CI/CD, Ansible, Jenkins, GitHub Actions, Git, GitHub, Jira
Observability tools: Prometheus, Grafana, Datadog, ELK, PagerDuty
Container Orchestration: Linux, Docker, Kubernetes, ArgoCD, Microservices, Distributed Systems
Technologies: Nginx, Flask, Django, Selenium, TCP/IP, Apache Airflow, DevOps, Cloud Computing, Scrum, Tableau, PowerBI

Experience

Software Engineer | Headout   Mar 2023 − Jul 2023
- Owned Backend codebase in Python to assist long-running assets downloading tasks by task scheduling in **Kubernetes** clusters for improving customer interaction and reduced execution cost by 50%.
- Led transition from manual configuration and resource management to adoption of Infrastructure as Code using **Terraform, Ansible, and Python** reducing provisioning time by 30%.
- Dockerized stand-alone recommendation system, deployed it into Kubernetes and achieved a 30% reduction in response times and a 20% improvement in resource utilization through horizontal autoscaling and performance optimization.
- Spearheaded efforts to enhance software reliability by introducing end-to-end automation tests. Leveraged TestNG, Selenium, and Cucumber to establish a robust testing framework for ensuring product's stability and integrity.

Software Engineer | Jivox Corporation   Jan 2021 − Mar 2023
- Migrated critical on-premise infrastructure to **AWS** public and private cloud infrastructures using Agile methodologies and demonstrated expertise in information **security** management and availability of critical data and systems.
- Conducted regular security assessments and vulnerability scans, ensuring timely identification and mitigation of security threats. Configured and monitored AWS security groups, IAM roles, and security policies.
- Leveraged Kubernetes to orchestrate deployment, scaling, routing, and load balancing of Docker containers across namespaces leading to a reduction of 25% of infra cost. Initiated establishment of a **Jenkins** server on Amazon Elastic Kubernetes Service (EKS), streamlining deployment process and reducing the TAT by 80%.
- Pioneered implementation of centralized logging and monitoring solutions using ELK Stack, **Datadog** resulting in improved incident response times and system reliability. Mentored junior team fostering professional growth & team productivity.
- Awarded Above & Beyond Individual, Above & Beyond Team, Mountain Mover, Spot Awards for the automation activities.

Software Engineering Virtual Intern | JP Morgan & Chase   Jun 2020 − Aug 2020
- Developed a React application to provide real-time livestock data for traders through portfolio charts. Interfaced with a stock price data feed through JPMorgan Chase frameworks, leveraging **Python** on backend to establish a robust notification framework for tracking circuit-bound events for reducing rapid losses.

Web Dev & 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.
- Used Microsoft **Azure** ML Studio for performing Linear, Exponential, and Random Forest models to predict green time, reducing traffic in these areas by enabling traffic diversions.

Projects

Face Mask Detection System | AWS, OpenCV, MYSQL, Python, Flask | Publication
- Architected a web application and installed it on AWS EC2 to identify individuals not wearing face masks. Autoscaled instances based on the load and used AWS SNS and Lambda modules for automating real-time alerts. Achieved recognition by publishing the project's AWS architecture in a Scopus-indexed journal.

Immigpt | AWS, GCP, LLM, Machine Learning, DynamoDB, Python, React, Node.js | Website
- Developed a web portal designed to provide instant answers to immigration-related inquiries for multiple countries, leveraging large language models and machine learning algorithms for accurate and timely responses. The platform, built with cutting-edge technologies, serves as a valuable resource for individuals navigating complex immigration processes.

Achievements

Publications: Smart Guidance System for Blind | Program Slicing Techniques
Hackathons: RunnerUp Jivox Byte Riot Hackathon | Secured first place in the Headout-AI Hackathon
Personal Works: SoCalledHappenings - Instagram | ISO-SJSU
Certifications: Ultimate AWS Certified Solutions Architect Associate, Certified Kubernetes Administrator, Azure-900, AWS VPC and Networking, Python Data Structures, CI/CD with Jenkins pipelines, Java for Android