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	GPA: 4.00/4.00

Course Work: Cloud Computing, Distributed Systems, Enterprise Software Platforms, Software Systems Engineering, Machine Learning, Python Programming, Data Structures & Algorithms, Big Data Technologies, Data Mining, Data Visualization

Technical Skills

Cloud & Databases: Amazon Web Services (AWS), Microsoft Azure, MySQL, PostgreSQL, MongoDB, Redis
Infra & DevOps: Linux, Docker, Kubernetes, ArgoCD, Istio, Terraform, CloudFormation, Jenkins, GitLab, CI/CD, Ansible, Git
Technologies: Python, TypeScript, Go/GoLang, Groovy, Node.js, React.js, Java, Php, Bash, Flask, Machine Learning
Observability tools: CloudWatch, Datadog, Splunk, Prometheus, Grafana, ELK, PagerDuty, Newrelic

Experience

Site Reliability Engineer | Headout   **Mar 2023 – Jul 2023**
- Led transition from manual configuration and resource management to automated infrastructure provisioning using **Terraform, Ansible, and Python** reducing TAT by 30%.
- Streamlining the EKS Helm Chart deployment pipelines using **GitLab CI/CD** and improved build times by 24%.
- Dockerized stand-alone recommendation system and deployed into **Kubernetes** cluster to achieve 20% improvement in resource utilization and configured monitoring policies in **Splunk**.
- Managed AWS security groups, and network policies and conducted regular vulnerability scans to ensure timely identification of security threats.

DevOps 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** and availability of critical data and systems.
- 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.
- Developed **Lambda** functions to update or roll back **CloudFormation** stacks based on specific triggers set on a Git repository, ensuring infrastructure is automatically kept in sync with code changes.
- Implemented AWS VPC Endpoints, reducing public infrastructure costs by enabling private connections within AWS, enhancing security and cost-efficiency.
- Enhanced MySQL and MongoDB management with performance tuning, replication, and robust backup processes, ensuring high data integrity and system scalability.
- Received 3 Spot Awards and mentored 20+ undergrad interns to complete AWS Certifications and monitored their progress.

Software Engineer 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.

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

Face Mask Detection System | AWS, OpenCV, MYSQL, Python, Flask | Publication
- Developed a web application on AWS EC2 for facial mask detection implemented EC2 auto-scaling and used AWS SNS and Lambda for real-time alert automation. Integrated CloudFront to optimize global accessibility and reduce latency. The project was recognized and published in a Scopus-indexed journal.

Immigpt | AWS, GCP, LLM, Machine Learning, DynamoDB, Python, React, Node.js | Website
- Engineered a dynamic web portal that harnessed the power of large language models and machine learning algorithms to provide immediate and accurate answers to immigration inquiries.

Achievements

Publications: Smart Guidance System for Blind | Program Slicing Techniques
Hackathons: RunnerUp Jivox Byte Riot Hackathon | Secured first place in the Headout-AI Hackathon
Works: Student Ambassador - Adobe | SoCalledHappenings - Instagram | ISO-SJSU
Certifications: 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