ARAVINDREDDY MALLURI

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EDUCATION

San Jose State University   **Dec 2024**
M.S., Artificial Intelligence
- **Coursework:** Machine Learning, Cloud Technologies, Data Mining, Enterprise Distributed Systems, Artificial Intelligence and Data Engineering, Web Technologies, Deep Learning

Vellore Institute of Technology   **May 2021**
Master of Technology, Software Engineering
- **Coursework:** Problem Solving and Programming, Data Structures and Algorithms, Computer Networks, Operating Systems, Software Configuration Management, Linux Programming, Agile Development Process

WORK EXPERIENCE

SysCloud Technologies PVT LTD   **Apr 2021 - Jul 2022**
Site Reliability Engineer   *Chennai, TN, India*
- Deployed and managed multiple microservices on AWS EKS and Azure AKS with high availability and fault tolerance, implementing HPA and VPA for dynamic scaling. Utilized Helm for version control, configured load balancing with health checks, and ensured zero-downtime updates, which optimized performance and reliability across the cloud environment
- Implemented AWS SQS in microservices architecture for asynchronous task processing improving scalability and fault-tolerance. Utilized Standard Queues for high-throughput and Dead Letter Queues for failure handling, optimizing overall system reliability.
- Automated creation of 50+ CI/CD Pipelines for deployment of microservices applying terraform, ensuring consistent deployment flows with customizable variables, reducing manual effort and boosting deployment efficiency.
- Implemented Redis for caching frequently accessed data and real-time notifications in a cloud backup SaaS application, reducing read latency and DynamoDB throughput costs. Utilized redis pub/sub for real-time backup status updates and session management, ensuring low latency user interactions and improving user experience.
- Developed report generation and interactive dashboards with FastAPI and React for a Cloud Backup SaaS application, facilitating customers to track backup status, storage usage, upload/download performance, and security metrics.

SysCloud Technologies PVT LTD   **Sep 2020 - Mar 2021**
Software Engineer Intern   *Chennai, TN, India*
- Implemented user authentication and authorization using AWS Cognito and JWT tokens in a cloud backup SaaS application. Configured AWS API Gateway to validate tokens, enforce RBAC, and securely route requests to backend microservices, improving performance with rate limiting and monitoring
- Developed comprehensive monitoring dashboards using Prometheus and Grafana for all microservices deployed on Kubernetes and automated Slack notifications for real-time alerts, decreasing error resolution time by 40%.
- Automated numerous tasks writing Shell scripting and Python, diminishing manual work by 30%.
- Implemented secrets management for Kubernetes microservices leveraging AWS Secrets Manager and Azure Key Vault, integrating with the Secrets Store CSI driver for dynamic, secure access to sensitive data.
- Secured S3 buckets with encryption, IAM policies, and bucket policies. Reduced costs by S3 lifecycle policies to transition data to Glacier and enabling versioning for efficient backup management.

Yebelo Technology PVT LTD   **Jan 2020 - Aug 2020**
Software Engineer Intern   *Bengaluru, Karnataka*
- Developed a scalable and reliable notifications microservice to handle millions of emails, SMS, and push notifications, ensuring availability and performance under heavy load
- Built a robust payment processing system using FastAPI, ensuring high performance and scalability to handle large transaction volumes.
- Built and deployed a robust JWT-based authentication system using FastAPI, enabling secure user login, token generation, and role-based access control (RBAC).

Yebelo Technology PVT LTD   **May 2019 - Aug 2019**
Software Engineer Intern   *Bengaluru, Karnataka*
- Designed and executed autoscaling strategies for AWS services, including EC2 instances, Spot Fleets, Auto Scaling Groups (AGs), and ECS, ensuring cost optimization and high availability.
- Wrote a Python script utilizing concurrency programming to efficiently transfer data from a database exposed via API to S3, significantly enhancing upload speed.

SKILLS

- **Languages & Databases:** Python, Terraform, MongoDB, SQL, YAML, JSON
- **Cloud:** Kubernetes, Docker, Kafka, Redis, AWS (VPC, IAM, EKS, ECS, Fargate, Lambda, RDS, CloudFront, S3, DyanmoDB, MongoDB, EC2, EBS, EFS, CodeBuild, CodeDeploy, CodePipeline, ECR, KMS, Route 53, ElastiCache, CloudFormation, Parameter Store, Cognito, SNS, CloudWatch, SQS), Azure(AKS, Azure Functions, Azure Key Vault, Azure Blob Storage, Azure App Service, Azure Monitor, Azure Pipelines, Azure Virtual Machines, Azure Container Registries, Azure Managed Grafana, CosmosDB)

- **Web Technologies:** React, FastAPI, JavaScript, Bootstrap, HTML5, CSS3
- **Software & Frameworks:** Linux, Windows, React, FastAPI, Flask
- **Tools/Platforms:** Git, Jenkins, SonarQube, Visual Studio Code, Figma, Grafana, Prometheus, Opentelemetry

PROJECT EXPERIENCE

San Jose State University

LLM Management and Security Platform Development   **Aug 2024 - Jan 2025**
- Created a platform centralizes LLM access, streamlines lifecycle management, and ensures resilience, cost control, and smooth operations for Generative AI applications.
- Implemented features for cost visibility, security and privacy compliance, and rapid deployment.

Vellore Institute of Technology

Face Mask Detection Alert System   **Aug 2020 - Dec 2020**
- Led a team of three in accomplishing a project applied OpenCV and CNN to detect mask adherence during the COVID-19 pandemic, emphasizing public health and safety measures.

CERTIFICATES

- **AWS Certified Solutions Architect - Associate**: Aug 2024
- **Certified Kubernetes Administrator**: May 2022