HARSHA KALYANARAMAN

linkedin.com/in/khvr • harshakalyanaraman.com • harshakalyanaraman@gmail.com • github.com/khvr • (857) 800-5215 • Boston, MA

EDUCATION

Master of Science, Computer Systems **Dec 2020**
Northeastern University, Boston, MA **GPA: 3.5/4**
Courses: Object-Oriented Design, Data Networking, Web Development,
Network Structures and Cloud Computing, Advanced Cloud Computing

Bachelor of Technology, Electronics and Communication Engineering **May 2018**
SRM Institute of Science and Technology, Chennai, India **GPA: 9/10**
Courses: Data Structures and Algorithms, Computer Communication, Computer programming

TECHNICAL SKILLS

Programming and Scripting:	Bash, Python, JavaScript, Java, C#, Go
Modern Tech Stacks:	AWS, Google Cloud, Azure, AngularJS ASP. NET, MEAN, PostgreSQL, DynamoDB
Container Orchestration:	Kubernetes, Helm, Docker, Kubernetes Operations (kops)
Source Control & Automation Tools:	Git, CircleCI, Kafka, packer, Terraform, Ansible, Jenkins
Protocols:	MQTT, CoAP

WORK EXPERIENCE

IT Division, Secretary of Commonwealth of Massachusetts, Boston-MA
Backend Developer Intern **Jan 2020 - Jun 2020**

- Developed new and restructure legacy web applications, ensuring proper documentation and reports in all stages of product lifecycles which simplified bug fixing and code readability
- Enhanced website experience by analyzing needs of the client and developed engaging widgets and custom web tools for landing page across multiple web browsers to streamline accessibility for users
- Participated in daily meetings to update project leads and brainstormed new approaches to current problems in project progress
- Installed, configured, managed tools for resource & log Monitoring which optimized budget alerts and minimized service downtime
- Delivered consistent quality of service by building a robust pipeline with the client to ensure project goals were consistently met or exceeded measured from the consistently positive feedback of the manager and other teams
- Identified, analyzed and resolved bugs during testing which resulted into 50% faster loading times for the data-heavy application

PROJECTS

Microservices Deployment over Kubernetes, Northeastern University, Boston-MA [DevOps] **Aug 2020 - Dec 2020**

- Automated Configuration using **Ansible** to setup and destroy A) **Jenkins** Server (CICD pipeline to build, push linux images to DockerHub) B) Kubernetes Cluster using **kops** C) three RDS instances running on separate VPC peered to Cluster VPC
- Orchestrated highly available and reliable applications using **helm** charts including **Kafka**, Zookeeper, Metrics Stack - **Prometheus, Grafana** and Logging Stack - **EFK (ElasticSearch, Fluentd, Kibana)**

Cloud Native Application on AWS, Northeastern University, Boston-MA [Cloud Deployment] **Aug 2019 - Dec 2019**

- Developed a backend application with REST API architecture (**Node.js, PostgreSQL**) for recipe Management System which is deployed on EC2 instance, ELB to distribute traffic and implemented CI/CD pipeline with **CircleCI**
- Configured IaaS using **Terraform** for VPN, AMI (using packer), EC2, ELB, SNS, Email Delivery with Lambda Function with SES , RDS, DynamoDB, S3, Route 53, CloudWatch, Autoscaling based on cloudwatch trigger, and IAM (Roles and policies)

Travcomp (Travel Companion) MEAN app, Northeastern University, Boston-MA [Node.js] **Jan - April 2019**

- Devised a web application using **MEAN** Stack for Hotel reservation web application with comprehensive integration tests to implement REST-based API and persisting data on **MongoDB** database and perform basic CURD Operations
- Performed unit testing by using **Mocha, Chai** and secured the app by implementing authentication and session management

Fire Alert Safety System, Northeastern University, Boston-MA [IoT/Python] **Feb - April 2019**

- Brainstormed an IoT-Architecture with python that reads sensor data (temperature, humidity, smoke) from the SenseHAT of **Raspberry Pi** to automate fire detection for alerting and to collect valuable data sent to the Cloud for further analytics purpose
- Formulated a threshold when breached sets a variable which is subscribed (**MQTT**) by the actuators, the cloud stores data (JSON file) in its DB for actuation and future prediction

CERTIFICATION

AWS Certified Solutions Architect - Associate certification version (SAA-C02) **Sep 2020 - Sep 2023**