HARSHA KALYANARAMAN

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EDUCATION

Northeastern University, Boston, MA **Dec 2020**
Master of Science in Computer Systems Engineering, Internet of Things Specialization **GPA: 3.5/4**
Courses: Object-Oriented Design, Data Networking, Connected Devices, Web Design and user expirience, Network Structures and Cloud Computing, Advanced Cloud Computing

Certification: AWS Certified Solutions Architect - Associate certification version (SAA-C02)

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

TECHNICAL SKILLS

Protocols and Architecture:	MQTT, CoAP, Microservice, RESTful, MEAN
Programming Languages:	Python, JavaScript, C++, Java, C#
Source Control & Automation Tools:	Git, CircleCI, Kafka, packer, Terraform, Ansible, Jenkins, TFS, Maven, Jenkins
Containers Orchestration:	Kubernetes, Helm, Docker, Kubernetes Operations (kops)
Cloud technologies:	EC2, S3, SNS, Dynamo DB, ELB, Google Cloud services
Web Technologies	HTML, CSS, AJAX, ReactJS, jQuery, JSON, Node.js, Angular, ASP.NET

WORK EXPERIENCE

IT Division, SEC Of Massachusetts, Boston-MA
Application Developer Intern **Jan 2020 - Jun 2020**

- Developed a Full stack web app using HTML5,CSS, Javascript,SQL with **.NET** framework enabling users to select and register for workshops
- Implemented the web application using ASP.NET web Form (Master page, user controls, validation controls and AJAX extensions) and Web services, Windows communication foundation (WCF) and ASP.NET Web API
- Designed, programmed, and delivered a Microsoft .Net Web application to allow administrators to modify any part of the application and to keep track of the workshops and registrants using **ADO.NET** and **JQuery**
- Improved legacy front end by Created SQL scripts using **TSQL** (Stored Procedures and Triggers), **LINQ** as ORM and generated PDF using Crystal Reports which resulted into 50% faster loading times for the data heavy application

PROJECTS

Cluster Orchestration using Kubernetes, Northeastern University, Boston-MA [DevOps] **Aug 2020 - Dec 2020**

- Automated the process of deploying a Kubernetes cluster on AWS using kops and Ansible playbooks
- Deployed highly available and reliable weather alert applications onto the cluster using Helm charts, including charts for decoupling apps using Kafka, Prometheus, Grafana, Elasticsearch, Fluentd and Kibana to implement logging and metrics collection
- Used Jenkins to implement a continuous integration and continuous deployment pipeline

Cloud Computing, 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)

Hotel Booking App, Northeastern University, Boston-MA [Node.js] **Jan - April 2019**

- Directed a team to deploy a web application using **MEAN** Architecture for potential customer to book a reservation at a hotel based on the location provided
- Implemented Node server at backend with **MongoDB** as database and **AngularJS** for frontend client

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