VISHAL DAMODHARAN

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EDUCATION

Northeastern University, Boston, MA **May 2021**
Master of Science in Computer Systems Engineering, Internet of Things Specialization **GPA: 3.54/4**

SRM Institute of Science and Technology, Chennai, India **May 2018**
Bachelor of Technology, Electronics and Communication Engineering **GPA: 8.3/10**

TECHNICAL SKILLS

Programming/Scripting Languages:	Python, Bash, Golang, JavaScript, Java
Protocols:	MQTT, CoAP, HTTPS, HTTP, TCP/IP
Database:	MySQL, PostgreSQL, Oracle, MongoDB
Software Tools:	GitHub, CircleCI, Terraform, Atlassian, JIRA
Container Orchestration:	Kubernetes, Helm, Docker, Kubernetes Operations (kops), AWS ECS

WORK EXPERIENCE

CD Data, Wyoming
Devops Engineer **Jun 2022 - present**

- Migrated systems, services like **Jenkins** deployment pipeline server, main application server and all other supporting services from **AWS** to **GCP**
- Upgraded the infrastructure to run in any cloud architecture and not only AWS by moving the infra code to **Terraform** from **CloudFormation**
- Proposed a plan to help reduce company's cloud expenses and executed it by simplifying the system and by performing migration of the architecture

Esper.io Inc, Bellevue, WA
Devops Engineer **Jul 2021 - Jun 2022**

- Implemented a CI/CD pipeline in **Jenkins** for an alerting system which is a part of the main system running on Elastic Beanstalk
- Created a internal data pipeline for aggregation of all the device metrics in a centralized **Redshift** and visualized it in **Quicksight**
- Designed a monitoring system for fetching logs and metrics for all product's applications running on Elastic Beanstalk container and other services using EFK stack (**Elasticsearch, Filebeat, Kibana**)
- Collaborated with a team of cloud Engineers to design a simulation of a device in **Golang** and managed the automation and deployment of the fleet of devices to communicate and send messages with the dashboard
- Worked on the architecture and infra for deployment of an over-the-air update system for the company managed OS in **GCP**
- Created a streaming service to stream files and app from **S3** with static IP address using **Global Accelerator**, **ALB** and **EC2**
- Migrated the streaming service which was initially deployed on EC2 to **kubernetes** cluster with AWS as cloud provider backend
- Organized my work using **JIRA**, held daily meeting to communicate progress with manager and feedback using slack and zoom

Open Water Accelerator, Menlo Park, CA
Software Engineer Intern **Sep 2020 - Dec 2020**

- Created a Python/Flask based web application using Python scripting for data processing, MySQL for the database, R for data visualization and Used Python Library Beautiful Soup for web scrapping to extract some data for graphical representation
- Devised infrastructure using **CloudFormation** in AWS to create a EC2 server to run applications and maintain them
- Organized work using **JIRA**, held daily meeting to communicate progress with manager and feedback using discord and zoom

PROJECTS

Microservices over Kubernetes **Sept 2020**

- Automated Infrastructure using Terraform to setup and destroy A) Jenkins Server (CICD pipeline to build, push linux images to ECR) B) Kubernetes Cluster using kops
- Orchestrated highly available and reliable applications using helm charts including Kafka, Metrics Stack - Prometheus, Grafana and Logging Stack - ELK (ElasticSearch, Logstash, Kibana)

AWS Deployment Architecture **Feb 2020**

- Developed a 3 tier Auto-scalable web application running on **AWS EC**2 implementing IaaS, PaaS and SaaS services
- Devised the infrastructure using **Cloudformation** to run a **EC2** server connecting to **RDS** engine running **PostgreSQL** server
- Implemented **load balancer** to distribute traffic from user request to various servers, **auto scaling group** to increase the scalability of the application and **security groups** to manage the network traffic.
- Automated app with **CI / CD** using **GitHub**, **CircleCI** and **Amazon CodeDeploy** to update code without interruption,

Ubidots Home Monitoring App **Nov 2019**

- Scripted a IOT architecture using **python** in a **Raspberry Pi** with a **sense-hat** which was used to sense temperature, pressure and humidity and were put together to monitor these values frequently
- Created a Publisher-Subscriber architecture for the application to communicate and store sense-hat data in **Ubidots** cloud
- Formulated a variable as threshold which is subscribed(MQTT) by the Actuators which when breached the app along with triggering the actuators sends alert to a subscribed Email through SMTP Protocol