Pavan Raga

www.github.com/pavanraga • www.linkedin.com/in/pavanraga • pavan.raga@u.nus.edu • +65-98612663

463 Pasir Panjang Rd, Singapore 118797

About Me

Skilled software engineer with more than 5 years of experience in DevOps and software development. I'm seeking a DevOps Engineer/Consultant role involving infrastructure systems or backend development. I'm passionate about immutable, reliable, automated infrastructure that scales optimally with organizational needs.

Professional Certifications

- Certified Kubernetes Administrator (CKA) Issued by: Linux Foundation **Feb 2020**
- AWS Certified Solutions Architect(ACSAA) Issued by: AWS **Apr 2019**

Work Experience

Dyson **Singapore**
DevOps Engineer(Intern) *Jan 2020 - Apr 2020*

- Developing an internal platform to detect the best suited object detection algorithm given a data-set.
- Wrote microservices to produce KPI results for different algorithms. Used Python and Flask as web-framework.
- Deploying the services using docker compose locally for testing and re-deploying the same to managed cloud offerings such as EKS by AWS for production use.
- Created S3 buckets in the AWS environment to store data set.
- Used DynamoDB, a NoSQL document DB to store dataset mapping with task type(labeling, training, validation).
- Used IaC(terraform) to provision AWS resources.

WalletSocket **Singapore**
DevOps Engineer(Freelancer) *Aug 2019 - Jan 2020*

- Assisted in design and architect of the Pay0k platform which is a payment gateway for merchants to accept various cryptocurrencies like bitcoin, ethereum.
- Responsible for developing and maintaining the CI/CD pipeline for both staging and production environments.
- Responsible for Infrastructure as Code provisioning by using Terraform.
- Utilized Kubernetes extensively to orchestrate the life cycle of polyglot microservices. Followed best practices to develop manifests and integrating the same with continuous delivery.
- Improved DMZ zone by integrating Ingress Nginx as API gateway to provide path based routing and load balancing between service endpoints.
- Added TLS termination support in API gateway. Used Let's Encrypt service to provide X.509 certificates and integrate with certification manager resource in k8 to auto renew certificates.
- Handled increasing traffic load by scaling the backend services/container horizontally by using K8s HPA.
- Performed monitoring of application using Grafana/prometheus and k8s WebUI.
- Deployed replicated MongoDB using helm to provide high fault tolerance for the persistent layer.
- Performed canary deployment to gracefully upgrade the applications.

Cisco Systems Inc **Bangalore, India**
DevOps Engineer II *Apr 2018 - Jun 2019*

- Independently worked on "Cisco-Capture" tool to enhance the debuggability in live deployments by capturing control and data traffic.
- Setting up jenkins job to pull latest code from GIT via webhook and deploy application code in production. Managing access control setup in jenkins.
- Moved monolothic application to configure routers to containerized application and deployed them in k8s cluster to provide fault tolerance.

- Managed the infrastructure of applications and database on cloud.(Shared storage on Multiple EC2 Instances via GlusterFS)
- Performed blue green deployment to upgrade the well-tested applications to production.

Cisco Systems Inc **Bangalore, India**
Software Engineer I *Mar 2016 - May 2018*

- Developed Layer 2 features of ASR 903 series of service aggregation routers.
- Implemented Dying Gasp support to minimise down time during power outages.
- Built "Autonomous Networking" feature to enable zero touch deployments. This is pull-based infrastructure as Code tool.

AllGo Embedded Systems **Bangalore, India**
Software Engineer *Jul 2014 - Feb 2016*

- Part of Mirrorlink stack team, a stack which helps in replicating the smartphones display on to car's HMI/infotainment unit.
- Developed CI of software commits using Jenkins to enable fast delivery.
- Built a recovery module for HMI by detecting unhealthy application in the unit and respawning them.

Education

National University of Singapore (NUS) GPA: 4.0/5.0 **Singapore**
Master of Technology in Software Engineering *Jun 2019 - Jul 2020*

- Architecting Cloud Native Scalable Systems, Securing Ubiquitous Systems and Engineering Big Data
- Developed pay0k platform for WalletSocket and deployed into production for south korea region in Jan 2020.

National Institute of Engineering (NIE) GPA: 8.99/10 **Mysuru, India**
Bachelor of Engineering in Computer Science *Jun 2010 - Sep 2014*

Keywords

Languages: Python, C, YAML, HCL.
Databases: MongoDB, MySQL.
Infrastructure: Kubernetes, Amazon Web Service, DigitalOcean, Google Cloud Platform
Monitoring/Log: Grafana, Prometheus, Elasticsearch, Kibana, Logstash
Tools: Jenkins, Ansible, Terraform, Jira, Wireshark, VS Code, Git, Docker, Nginx, Postman.