

SUMMARY

I am a software engineer with 10+ years of well rounded (backend, devops, SRE) experience. I am currently working at IBM on kubernetes operators, internal developer platform and tooling.

EXPERIENCE

IBM

San Jose, CA, USA

Software Engineer

Oct 2015 - Present

Multicloud SaaS Platform:

- * An internal developer platform (IDP) for IBM SaaS products supporting aws, azure and IBMCloud.
- * Responsible for implementing SRE practices and tooling for the platform team.
- * Ensure reliability of platform by participating in on-call rotations and resolving cluster issues in timely manner.
- * Responsible for monitoring and maintenance of multiple openshift clusters(300+) in the mcsp platform.
- * Automated deployment of observability stack (grafana,loki,prometheus) on clusters.

CloudPak Engineering:

- * Designed and implemented our software delivery pipeline using gitops principles, pull-request (pr) driven, providing more feedback through stages, reducing complexity and build time.
- * Developed Kubernetes operator for Redis database, which is used as shared dependency across IBM CloudPaks. This helped teams to save (redundant) development effort on common components and ensure consistency.
- * Responsible for internal developer advocacy and developed certification framework for delivery of IBM CloudPaks on RedHat OpenShift (RHOC). This helps IBM produce high quality, consistent cloud native software.
- * Developed internal developer CLI (go) for packaging and delivering IBM CloudPaks, helping internal IBM developers to deliver faster through our pipeline.
- * Developed automations for disconnected (offline) installs of IBM CloudPak on Openshift clusters. Offline installation is tricky since deployment manifests reference public registry, and here images needs to be hosted in private container registry.
- * Implemented code & image signing for CICD pipeline, to ensure integrity and avoid supply chain attacks (SLSA compliance).
- * Maintainer of inner source components and participated in external open source projects.

Watson Natural Language Understanding:

- * An API as a service platform for natural language understanding tasks.
- * Integrated sentiment service with existing stack (Typescript).
- * Developed helm charts to deploy the product in IBM Private cloud.

Spark as a Service:

- * A multi-tenant platform for running notebooks and batch jobs with Apache Spark, running on top IBM Spectrum and Apache Mesos.
- * Created a containerized integration test framework using Cucumber for the CI/CD pipeline.
- * Improved the platform security by fixing vulnerabilities identified from external penetration testing.

BigInsights on Cloud:

- * A big data platform running Apache Hadoop on VM's and baremetal machines.
- * Created Chef recipes to scale clusters by adding nodes, backup and restore.
- * Implemented GDPR compliance, by adding Vault support and encrypting disks. Encryption was challenging task due to large size of disks (4 TB X 8 disk X 5-8 nodes). It's typically done by backing up data to temp disk storage and then encrypting it, but instead I proposed to use Hadoops self-healing and rack-awareness to handle data loss during encryption which cut down time from weeks to days.

Analytics NextGen Workbench:

- * A platform for data scientists to design and develop predictive models and execute with IBM SPSS backend.
- * Developed a scheduler microservice using Akka/Scala for the platform.

University of South Florida

Research Assistant

Tampa, FL, US

Aug 2014 - May 2015

Research Assistant:

- * Analyzed customer software subscriptions data provided by Wharton customer analytics initiative (wcai) research group.
- * Responsible for cleaning and preparation of data set, feature extraction, data visualization and identifying research questions.

Cognizant

Software Engineer

Chennai, TN, IN

Aug 2008 - Nov 2013

Performance Engineering:

- * Responsible for profiling JVM and heap dump analysis, to identify potential memory leaks and slow running code.
- * Tuned JVMs and recommended GC policies appropriate for the application, which improved the scalability and reduced memory footprint.
- * Developed RESTful web services, providing in-house performance engineering tools as SaaS services for internal development teams.

EDUCATION

University of South Florida

Master of Science in Management Information Systems; GPA: 3.94/4.0

Tampa, FL, US

Jan. 2014 - May. 2015

Madras Institute of Technology

Bachelor of Engineering in Computer Science; GPA: 6.8/10.0

Chennai, TN, IN

Aug. 2004 - July. 2008

CERTIFICATIONS

- * Certified Kubernetes Administrator (CKA)
- * Certified Kubernetes Developer (CKAD)

PROGRAMMING SKILLS

Languages: Go, Python, TypeScript, Scala

Cloud Platforms: AWS, IBM Cloud

Container Orchestration: Kubernetes, Redhat Openshift

Infrastructure: Terraform, Ansible, Chef

Observability: Grafana, Loki, Prometheus

CI/CD: Travis, ArgoCD, Tekton

Databases: RDBMS (PostgreSQL, MySQL), NoSQL (Redis, MongoDB)

ML Frameworks: R, Tensorflow

Others: Containers, Git, REST API