Abhishek Kumar
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Education

- **Indian Institute of Technology (IIT) , Bombay**
  Master of Technology (M. Tech), Computer Science and Engineering(CSE) *July, 2017*
- **JCD Memorial College of Engineering, Sirsa (Haryana)**
  Bachelor of Technology (B. Tech), Computer Science and Engineering(CSE) *July, 2014*

Experience

Software Engineer, DataXu *July 2017 - Present*

- Development of an IaC Golang tool to manage company's critical AWS resources in a versioned and automated environment by codifying the AWS resources into configurations.
- Implementation of Golang, Jenkins based tool to grant temporary, auditable cross account S3 bucket access to an IAM role.
- Redesigned company wide AWS access leveraging Single Sign-on. Efforts involved configuring fine grained roles for SSO and provision of a wrapper over aws-cli to authenticate a user against Okta using SAML assertion to retrieve temporary STS credentials from AWS.
- Development of Python based tool to examine tags of newly created resources as per company tagging guidelines to track AWS cost at more granular level.
- Development of a Python based break-glass procedure to assume elevated permissions in AWS while handling escalations.
- Provisioning of Athena workgroups to get better cost distribution between teams and applications.
- Investigation of spot fleets over on-demand instances for cost optimization.
- On-call duties to ensure availability and performance of SRE's services.
- Agile Software Development using SCRUM.

Technical Exposure

- **Certification**: Oracle Certified Professional, Java SE 6 Programmer
- **Languages**: Golang, Java, Python, Bash scripting
- **AWS**: IAM, EC2, S3, Lambda, SNS, SQS, Athena, KMS, Cloudwatch, aws-cli, botocore etc
- **Automation**: Jenkins, Ansible
- **Miscellaneous**: Github, Artifactory, Linux etc

Academic Projects

- IITB Network Monitoring and traffic analysis
  - Worked on zabbix framework to monitor network and determine the usage of network resources
  - Optimal level of anonymization so that users remain anonymous, but usage trends remain extractable while analysis
- Implementation of Distributed File Server Based on RAFT Consensus Protocol
  - Implemented a highly concurrent file server with Read, Write, Append, Delete, Compare-And-Swap and automatic expiry time as built-in primitives
  - Made the file server fault-tolerant by replicating it using the Raft consensus protocol. A system of five servers behaves as one transparently, and can survive node failures as long as a majority is functional
  - Implemented multithreading in file server to handle multiple clients at same time using Golang
- Implementation of Zero Knowledge Authentication protocol
- Seminar on Online Voting System using Bitcoin and Blockchain