

DIPTA DAS

Software Engineer

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Passionate Software Engineer with 4+ years of professional experience in Java, Golang, Scala, Spark, Docker, and Kubernetes. Completed M.Sc. in Computer Science with R&D expertise in the microservice architecture and code analysis.

EXPERIENCE

Software Development Engineer II (L5)

Amazon.com

September 2021 – Present Tempe, AZ, USA

Uses: Scala, Java, Spark

- Designed and implemented the "On Demand Data Deletion" feature, ensuring Amazon's compliance with GDPR and other data privacy regulations.
- Enhanced Elasticsearch clusters, achieving a 30% performance boost and a 50% cost reduction.

Graduate Research Assistant

Baylor Cloudhubs Lab

August 2019 – Present Waco, TX, USA

Uses: Java, Spring Boot, Docker

- Performed Static Code Analysis for Spring Boot projects to detect RBAC inconsistencies and code smells within program source code and bytecode.
- Developed the backend and managed production deployment of the ACM SAC 2020 virtual conference hosting site.

Software Engineer

AppsCode Inc.

April 2017 – April 2019 Dhaka, Bangladesh

Used: Golang, Kubernetes, Docker, gRPC, HAProxy

- Worked as the lead developer of Voyager, Stash, and KubeCI.
- Developed custom-resource (CRD) controllers for Kubernetes to perform utility tasks like volume backup, ingress traffic control, etc.
- Automated the Kubernetes cluster provisioning process in VMs for GCP, AWS EC2, Azure, and DigitalOcean Droplet.
- Designed gRPC based API servers and integrated monitoring for containers using Prometheus metrics and Grafana.

EDUCATION

M.Sc. in Computer Science

Baylor University

Aug 2019 – July 2021 Waco, TX, USA CGPA 3.90

B.Sc. in Computer Science and Engineering

Chittagong University of Engineering and Technology

May 2012 – April 2017 Chittagong, BD CGPA 3.59

ACCOMPLISHMENTS

- Divisional champion of ACM ICPC Dhaka Regional 2014 and 2015.
- Expert at Codeforces with highest contest rating 1707.
- Contributed to 20+ open-source projects by implementing new features, bug fixing, and issue reporting.
- Published 5+ articles on microservice security and code analysis.

SKILLS

Java Scala Golang Python C++
Docker Kubernetes Spring Boot
DynamoDB ElasticSearch Postgres
Spark Pytorch gRPC AWS

PROJECTS

Voyager

<https://github.com/voyagermesh/voyager>

- Implemented core features including HAProxy hitless reload, SSL integration, TCP load balancing using SNI, etc.
- Introduced automatic TLS certificate renewal using Let's Encrypt.
- Integrated OAuth2 to support authentication using Github, Google, Facebook, and OpenID.

Stash

<https://github.com/stashed/stash>

- Extended open-source project Restic to support Google Cloud Bucket and Azure Blob Storage.
- Improved volume backup and implemented initial database backup system.

KubeCI

<https://github.com/kube-ci/engine>

- Designed KubeCI from scratch to achieve a Kubernetes native CI/CD platform.
- Integrated GitHub with KubeCI to facilitate GitOps.

OSS CONTRIBUTIONS

Restic

<https://github.com/restic/restic>

A fast, efficient, and secure backup program.

Azure SDK for Go

<https://github.com/Azure/azure-sdk-for-go>

Go packages for using Azure services.

Javassist

<https://github.com/jboss-javassist/javassist>

Java bytecode engineering toolkit.