

ABDULLAH AL MARUF

SOFTWARE ENGINEER

LIFE PHILOSOPHY

"Do not fear failure but rather fear not trying"

- Roy T. Bennett

CONTACT

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Austin, Texas, USA

EDUCATION

M.S. in Computer Science
Baylor University

B.Sc. in Computer Science & Engineering
Chittagong University of Engineering & Technology

TECHNICAL SKILLS

GO C++ C Java Terraform

Kubernetes Docker AWS GCP

Azure PostgreSQL MongoDB

Linux Git Bash Cloud Native

Spring Boot Distributed System

STRENGTHS

Team Work

Self Learning

Communication

Optimist

Problem Solving

PROFILE

Passionate software engineer with **6+ years** of **software development** experience in **Go, Java, and C++**. Also worked as a DevOps Engineer to gain hands-on experience of the **infrastructure**. Acted as **team lead** of AppCode's **KubeDB** project. Love to participate in **programming contests**. An enthusiastic **team player**.

EXPERIENCE

Software Engineer

ZEISS Medical Technology

Oct, 2022 - Present

Temple, TX, USA

- > Collaborated with cross-functional teams to **migrate software** and **infrastructure** from AWS ECS to **Kubernetes** and **Azure**.
- > **Developed** and **optimized** applications for seamless Kubernetes integration while preserving backward compatibility.
- > **Developed** automation tools to streamline the migration process.
- > Technology Used: **TypeScript, Terraform, Kubernetes, Docker, AWS, Azure**.

Intern

Red Hat

Summer 2021, 2022

Brno, CZ (Remote)

- > Led a small team of undergraduate students to conduct **research** on **technical debt** visualization of **microservice anti-patterns**.
- > Analyzed version controlled codebase to find probable **code debts**.
- > Performed **literature** mapping study on technical debt and **code smells**.
- > Technology Used: **Java, Spring Boot, Git**.

DevOps Engineer

Grameen Digital Health

Feb, 2020 - Dec, 2020

Dhaka, Bangladesh

- > Assisted on the **deployment & migration** of the scalable cloud infrastructure to **Kubernetes**.
- > Collaborated with multiple teams to design **scalable software**.
- > Improved service auto-scaling, which reduced the server's financial cost by **~25%**.
- > Exercised **cloud-native** best practices for DevOps **automation, deployment, monitoring, and alerting**.
- > Technology Used: **AWS, Kubernetes, Ansible, Terraform, Docker, Docker Compose, Traefik, Nginx, HAProxy, Prometheus, etc.**

PROUD OF

- 🏆 **Competitive Programming**
 - Solved **1100+** problems on different Online Judges.
 - **Divisional Champion** of ACM ICPC Dhaka Regional '14 & '15.

- 🐙 **Open Source Participation**
User, follower, and contributor.

- 📄 **Research**
Authored multiple journal papers with 250+ citations.

- 📈 **KubeDB's growth**
From very few to thousands of daily users.

- 👥 **Leadership**
Served as President of Cuet Computer Club. Also acted as team lead of KubeDB.

TOP OPEN SOURCE CONTRIBUTION

- ⚙️ **kubernetes/kubernetes**
Production-Grade Container Orchestration.

- 🏠 **kubedb**
Database management tool for Kubernetes.

- 📦 **stash**
Backup and restore plugin for Stash.

- ⚙️ **kmodules/client-go**
Kubernetes client-go utilities

FIND ME ONLINE

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- 🌐 linkedin: [maruftuhin](#)
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- 📄 stackoverflow: [4628962](#)
- 📄 scholar: [Prun7T8AAAAJ](#)
- 📄 codeforces: [the_reedback](#)

EXPERIENCE

Software Engineer

📅 Feb, 2020 - Dec, 2020

📍 Dhaka, Bangladesh

[AppsCode Ltd.](#)

🔗 <https://appscode.com>

A platform for automating the deployment, scaling, and management of containerized applications.

- Developed **Kubernetes controller** tools to utilize Kubernetes services. Design and development of **KubeDB** project, A database management tool for Kubernetes.
- **Led team members** to design and implement the core features of KubeDB. Improved the reliability of the KubeDB application, which resulted in a **~200%** increase in returning users.
- Used: **Go, Kubernetes, Docker, MongoDB, Elasticsearch, GCP, AWS, Azure.**

TOP PROJECTS

KubeDB

🔗 <https://kubedb.com>

A cloud-native database management solution for Kubernetes to simplify and automate **provisioning, backup, recovery, failure detection** for various popular **databases**.

- **Led** a team of four members to **design & implement** the core features.
- Designed and implemented **MongoDB** clustering system support.
- Improved **PostgreSQL** and **Elasticsearch** clustering system.
- Worked with **Prometheus** exporters to export database metrics.

Stash

🔗 <https://stash.run>

A **volume backup** tool designed for **Kubernetes**. Under the hood, it uses **Restic** for backup/restore purposes.

- Improved **database backup** system using stash.
- Designed and implemented **Elasticsearch** and **MongoDB** cluster backup system from scratch.
- Integrated Stash support within **Kubedb** to backup/restore dbs.

Bear Mapping

A **team-management** project that uses **machine learning** to do an **automatic literature review**. It identifies relevant research papers that correspond to particular research questions.

- The backend was built with **Java Spring Boot** and **Python**, and the frontend was built with ReactJS.
- Followed **cloud-native** best practices to develop and deploy the microservices.

Microservice Architecture (MSA) Reconstruction

- Software architecture reconstruction (SAR) from tracing log.
- Automatically detection of **anti-patterns** from SAR.
- Used Istio to collect the tracing log, JAVA to process it, and Graphviz to generate the architecture graph.