

MD. MEHADI HASAN SHUVO

DevOps & Backend Engineer · Uttara, Dhaka, Bangladesh

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Summary

DevOps & Backend Engineer with 5+ years of experience building resilient, highly-available infrastructure and the backends that run on it. I own production deployments across multiple products, design self-healing HA systems, automate CI/CD end-to-end, and build the observability that keeps everything visible. Passionate about systems design, automation, and AI.

Technical Skills

DevOps & Infrastructure: Docker, Kubernetes, Ansible, Terraform, ArgoCD, Helm, Jenkins, GitHub Actions, GitLab CI, GitOps, Vagrant

Observability: Grafana, Prometheus, Loki, Grafana Alloy, Sentry, EFK / Elasticsearch

Languages: Python, Go, JavaScript, TypeScript, Java, C++

Frameworks & Backend: FastAPI, Flask, Django, Spring Boot, Express, React

Messaging & Data: Celery, RabbitMQ, Kafka, Redis, PostgreSQL (Patroni), MySQL (Galera), MongoDB

Cloud: OpenStack, AWS, GCP, DigitalOcean

Experience

DevOps Engineer

Aug 2024 – Present

NexGen Cloud

Dhaka, Bangladesh (Remote)

- Own and execute all production deployments across Hyperstack, AI Studio, InfraInsight and the Investor Portal via Ansible and one-click PR-merge Gitea workflows.
- Built full production deployment automation with Ansible for Infracore APIs, core services, the Admin Portal, AuthUI, database backups, OpenStack workers, proxy services and smoke/integration tests.
- Led end-to-end delivery of the AuthUI + Authentik authentication platform — OAuth (Microsoft, GitHub), 2FA, whitelabel logins and SSO across Gitea and Azure AD — serving thousands of internal and external users.
- Automated build and publish for five Hyperstack SDKs (Python, Java, Go, JavaScript, TypeScript) with single-tag releases to PyPI and npm.
- Built the observability stack (Grafana, Prometheus, Loki, Grafana Alloy, Sentry) across dev, staging, preprod and production, with streaming backups of metrics/logs to Ceph object storage.
- Owned AI Studio end-to-end across all environments with environment-specific CI/CD pipelines, Watchtower and integration tests.
- Designed real-time orphan-resource reporting and automated Docker cleanup across VMs, directly supporting cost optimization; re-architected the reporter onto the Kubernetes client as a Helm chart.
- Reworked self-service release pipelines with Slack alerts, automated cherry-picks and rollback, and added SonarQube scanning to CI for code quality and security.
- Automated OpenStack worker deployment through ArgoCD GitOps with log forwarding to Elasticsearch, and collaborated with the Infra team on multi-region onboarding.

Sr. Software Engineer

Apr 2024 – Jul 2024

Intercloud Limited

Dhaka, Bangladesh

- Delivered Managed Kubernetes-as-a-Service — one-click cluster deployment through the Brilliant Cloud portal with stateful-app support on OpenStack Cinder.
- Implemented a GitOps + ArgoCD based CI/CD solution for Brilliant Cloud.
- Deployed and maintained full-stack applications on Docker and Kubernetes, exposed to the internet over SSL.

Software Engineer

Oct 2022 – Mar 2023

Intercloud Limited

Dhaka, Bangladesh

- Built and deployed a high-availability SMS middleware (Flask, Celery, MongoDB) on Kubernetes, plus a middleware service for SMS-to-voice conversion.
- Added WebSocket protocol support to the Brilliant load balancer for efficient real-time traffic handling.
- Developed the Brilliant Drive backend and integrated object-storage APIs plus a Reminder module into Brilliant EDMS on S3-compatible storage.
- Refactored the Brilliant Cloud Invoice Service for automated monthly billing and invoice generation, and set up Loki + Grafana log aggregation for backend monitoring.

Trainee Software Engineer

Jan 2022 – Oct 2022

BJIT Group

Dhaka, Bangladesh

- Started my software career here — learned the Agile software development process and end-to-end delivery workflow.
- Built a small Android application in Java as a hands-on training project.

Education

Bangladesh University of Engineering & Technology (BUET) <i>M.Sc in Computer Science & Engineering (Part-time)</i>	Jul 2023 – Ongoing <i>Dhaka, Bangladesh</i>
Chittagong University of Engineering & Technology (CUET) <i>B.Sc in Computer Science & Engineering — CGPA 3.55 / 4.00</i>	2017 – 2022 <i>Chittagong, Bangladesh</i>
Rajuk Uttara Model College <i>Higher Secondary Certificate (HSC) — GPA 5.00 / 5.00</i>	2014 – 2016 <i>Dhaka, Bangladesh</i>
Rajuk Uttara Model College <i>Secondary School Certificate (SSC) — GPA 5.00 / 5.00</i>	2012 – 2014 <i>Dhaka, Bangladesh</i>

Selected Projects

HA Infrastructure Migration <i>MariaDB Galera, Redis Sentinel, Patroni, HAProxy, Helm, ArgoCD</i>	NexGen Cloud
Designed and benchmarked a migration of core stateful infrastructure to highly-available clusters: a parameterized Ansible role for MariaDB Galera, a custom Redis + Sentinel Helm chart with a global HAProxy failover layer (sub-10s failover), and Patroni/etcd PostgreSQL, deployed via ArgoCD GitOps.	
Authentication Platform (AuthUI + Authentik) <i>Authentik, OAuth, 2FA, SSO, OIDC</i>	NexGen Cloud
Delivered a modern, extensible auth platform with Microsoft/GitHub OAuth, 2FA, a whitelabel solution for partners, and SSO across Gitea, Azure AD and internal AI tooling (OIDC for Open WebUI / Ollama).	
Observability Stack <i>Grafana, Prometheus, Loki, Alloy, Sentry, Ceph, Caddy</i>	NexGen Cloud
Built a containerized observability stack across all environments, migrated agents to Grafana Alloy with in-log data redaction, provisioned alerting via the Grafana API, and streamed Loki/Prometheus backups to Ceph with zero local-disk overhead.	
Hyperstack SDK Automation <i>GitHub Actions, PyPI, npm</i>	NexGen Cloud
Automated single-tag build and publish for five language SDKs (Python, Java, Go, JavaScript, TypeScript) to PyPI and npm, eliminating manual release effort and accelerating developer adoption.	
Ephemeral Environments <i>Kubernetes, OpenStack</i>	NexGen Cloud
Designed on-demand OpenStack worker pods that provision, register and tear down per workload, cutting idle infrastructure cost and improving elasticity.	
Managed Kubernetes-as-a-Service <i>Kubernetes, Ansible, OpenStack Cinder, ArgoCD, GitOps</i>	Intercloud Limited
Built one-click Kubernetes cluster deployment through the Brilliant Cloud portal with stateful-app support on OpenStack Cinder, backed by an Ansible service and a GitOps + ArgoCD CI/CD pipeline.	
High-Availability SMS Middleware <i>Flask, Celery, MongoDB, Kubernetes</i>	Intercloud Limited
Built and deployed an HA middleware connecting the Brilliant SMS portal to an A2P aggregator, using Celery for asynchronous, retry-safe delivery on Kubernetes, plus a companion SMS-to-voice conversion service.	
Homeless People Aid — Undergraduate Thesis <i>Java, Android, Flask, Random Forest, scikit-learn</i>	CUET
Built an Android app that arranges help (shelter, food, hospital, rehab) for homeless people, with a Flask backend (Heroku) running a Random Forest classifier trained on a self-collected 700+ dataset; benchmarked multiple classification algorithms. Basis for the IJSSS publication below.	

Publications

- **A Smart Prediction Model for Identifying Homeless People Using Machine Learning and Immediate Assistance System for Homeless People Using Android Application** — M. M. H. Shuvo, M. Hoq Chowdhury. *International Journal of Society Systems Science*, Inderscience Publishers, 2023. doi.org/10.1504/IJSSS.2023.135917

Talks & Leadership

- **Speaker** — “Cloud in Digital Bangladesh”, seminar organized by UIU Computer Club (Aug 2023); presented the design and use of the Brilliant Cloud platform.
- **Joint Finance Secretary**, CUET Computer Club · **Vice President**, Rajuk EX Students Association (RESA), CUET · **IT & Programming Secretary**, Greater Noakhali Students Association, CUET.
- **Languages**: Bangla (native), English (fluent), Hindi (beginner).