Sadlil Rhythom

Senior Software Engineer, Tech Lead

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Experiences

Senior Software Engineer, Tech Lead
Google

March 2023 - Present
Dublin, Ireland.

Leading the Software and automation echo-system to ensure Security, Safety and Compliance of Google's Planet Scale Network.

- Building a Chaos engineering platform for Planet Scale Enterprise Network.
- Spearheaded the design and implementation of a continuous software testing infrastructure for SDN Control plane tools, encompassing both hermetic and real physical environments. This initiative standardized software testing, qualification and release practices across the organization. Additionally, automated testing was integrated into the software release and os qualification gating process, ensuring quality throughout the feature delivery cycle, improving the NPS score by 30% for overall software platform.

Software Engineer, Tech Lead
Google

April 2022 - Feb 2023
Dublin, Ireland.

Software Engineer and Tech Lead at Google Enterprise Networking. Engaged in building software echo-system to power the design, deployment, monitoring, and operation of Google Enterprise Network.

- Led and designed a multi-quarter project implementing a software infrastructure to automate network state compliance verification. This project significantly reduced manual intervention and accelerated the network deployment pipeline by 20%. Key activities included conducting comprehensive requirement and gap analyses, identifying components for new development vs reuse, and establishing architectural principles focused on maximizing quality with limited resources.
- Designed and built a proof-of-concept Network Delivery Orchestration platform, capable of guiding human operators with precise instructions to construct physical networks, ensuring predictable and consistent deployments.
- Led a team of 6 engineers, driving roadmap execution and managing OKRs deliverables to ensure timely and successful project completion.
- Mentored 5 engineers in their career development, resolving technical challenges and removing obstacles to help them navigating the ambiguities within their roles.

Software Engineer, Site Reliability Engineering
Google

Jan 2020 - April 2022
Dublin, Ireland.

Zero-Trust Boundaries SRE, upholding Google's Authentication and Authorization infrastructure and realizing the Zero Trust BeyondCorp vision for enterprise and cloud users with an unwavering commitment to reliability.

- Owned and led the development of Software Infrastructure to empower Googlers to use non-web applications seamlessly with the BeyondCorp Zero Trust security model.
- Designed and migrated a ICE based Internal proxy service to WebSocket, enhancing service reliability by 70% in home ISP.
- Implemented auto-scaling for BeyondCorp infrastructure to meet the growing demand for remote access to Google's enterprise resources.
- Designed an automated certificate renewal system for a fleet of 100+ machines in DMZ, saving 240+ SRE hours annually.
- Designed a continuous metric collection Infrastructre for CLI based tools, providing valuable insights into user behavior and system performance.
- Contributed to the *kubernetes/minikube* core team as a Community contributor.

Site Reliability Engineer
Booking.com

Jul 2019 – Dec 2019
Amsterdam, Netherlands

Site Reliability Engineer (SRE) focused on Core Infrastructure of Booking.com.

- Managed on-premises and cloud Kubernetes environments through Infrastructure as Code. Performed root cause analysis and implemented preventative measures for Issues seen on the Kubernetes based Continuous Deployment Pipeline.
- Designed an automation platform for data center rack maintenance for Kubernetes nodes, reducing risk of unplanned workload eviction.
- Maintained core monitoring systems using Prometheus, Grafana.

Senior Software Engineer, Backend
Grab

Nov 2017 – Jun 2019
Singapore.

Software Engineer for the Grab Supply Shaping team.

- Developed and implemented microservices to accommodate over 10 million requests daily, enhancing Grab's Supply Shaping Infrastructure. Overhauled the Incentives management infrastructure to incorporate point-based real-time updates, resulting in a 20% increase in driver partner adoption.
- Acted as the SRE liaison, ensuring the reliability of the team's cloud infrastructure. Engaged in the OnCall rotation and Engineering Postmortems process to uphold the systems' high availability and scalability.
- Led a small team of two in designing and executing a real-time event processing pipeline capable of handling 15 million events daily.

Experiences

Software Engineer   Apr 2015 – Nov 2017
AppsCode   Dhaka, Bangladesh.

Developed tooling to streamline the development, testing, deployment, and monitoring of containerized applications.

- Architect and developed the initial open source version of Voyager, a custom Kubernetes Ingress controller.
- Co-led a team of 4 in designing and implementing multiple Kubernetes operators, including KubeDB and Kubed.
- Implemented a gRPC-based API server and associated microservices to automatically provision managed Kubernetes in user's cloud.
- Designed and built a unified Artifact repository for Docker, Maven, npm and Composer packages.
- Contributed to open source projects such as Kubernetes.

Engineering Consultant   Aug 2017 – Oct 2017
Pathao Ltd   Dhaka, Bangladesh

Kubernetes and Google Cloud Infrastructure Consultant.

- Delivered multiple in-person Kubernetes training to Engineers.
- Bootstrapped Pathao's first Kubernetes Cluster on Google cloud infrastructure and migrated all workload and services.

Jr. Software Engineer   Nov 2014 – Mar 2015
Bit Mascot Pvt Ltd   Dhaka, Bangladesh

Backend Developer for WebCommander and AutoBill.

- Implemented product search and comparison functionalities for the WebCommander e-commerce platform.
- Developed a SQL library to reduce query complexities, improve query execution speed by 16% and developer experience.

Education

Mawlana Bhashani Science and Technology University   2011 - 2014
BSc in Information and Communication Technology   Dhaka, Bangladesh

Skills

Go, C++, Python, gRPC, Protocol Buffer, Microservices, REST	Docker, Kubernetes, GCP, AWS, Jenkins, Puppet, Promethus, Grafana, Loki	ElasticSearch, MySQL, PostgreSQL, Presto, Kafka, SQS, RabbitMQ, Neo4j	Technical Leadership, Mentoring, Software Architecture, Software Design, Software Defined Networking

About Me

Life Philosophy	Personality	Competitive Programming	Open Source
I don't Believe in Magic. Know why.	**Commander (ENTJ-A).** Commanders are bold, imaginative, and strong-willed, always finding a way – or making one.	Participated in 5 ICPC Dhaka Regional and 4 NCPC. Runner up in 2015 IEEE RUET IUPC.	Actively engage with and contribute to the open-source community. This resume is also built with open source https://rxresu.me.

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Highlights

Kubernetes   2016 - 2023

Contributor of Kubernetes - Production Grade container scheduling and management. Contributor Card.

- Minikube core team member as Google 20% Contributor. Driving the feature integration and minikube adoption across Google and outside.
- Fixed minikube multi node pod IP overlap.
- Added minikube vm driver alias support.
- Fix kubernetes reverse DNS support for headless service.
- Introduced Prometheus metric collection for Helm tiller.

Network Compliance   Jan 2023 - June 2023

Led the design and development of Griffin, a software system that automates network device state compliance assessments for Google's Enterprise Network, resulting in a 20% reduction in deployment time, saving over 5,000 hours annually. Architected the software, APIs, dependencies, and infrastructure. Managed a cross-functional team of 6, driving strategic decisions and upholding best practices for efficient and scalable development.

Grafana Logs / App Dashboard   2020 - Present

Created and maintain the widely adopted Grafana Loki Logs/App Log viewer dashboard, boasting over 4 million downloads.

voyagermesh/voyager   2016 - 2018

Voyager is a HAProxy backed secure L7 and L4 Kubernetes ingress controller with extended features. Designed and Implemented initial open source version of Voyager from scratch. Contributions.