# Rahul Shah

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## SKILLS

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|---|---|
| **Languages** | Java, C/C++, Go, Javascript/Typescript, Python. |
| **Frameworks** | Node.js, Express, React, Next.js, GraphQL, FastAPI, Springboot, gRPC. |
| **Database** | MongoDB, DynamoDB, MySQL, PostgreSQL, Oracle, Supabase. |
| **Cloud & Tools** | AWS, Azure, Docker, Kubernetes, Git, Jenkins, Redis, Apache Kafka, RabbitMQ, Selenium. |

## WORK EXPERIENCE

**Software Engineer Co-op** — May 2024 - Present
*Solutions Unified LLC.* — *New Jersey, United States*

- Developed a high-performance **Go** microservice, integrating customer payments with Stripe reducing transaction processing time by **40%** and achieving **99.9%** uptime.
- Automated multi-service (Elastic Beanstalk, S3, DynamoDB) deployment using AWS CDK, reducing customer environment setup time by 75% through seamless integration with CloudFormation.
- Engineered a **REST API** in Go with **WebSocket** support, implementing advanced SQL queries, SSO, and **OAuth 2.0**, which improved throughput by **30%** and reduced unauthorized access attempts by **75%**.
- Built a **Kafka-based** notification service for support requests, implementing a batching system that reduced API requests by **30%** and ensured data consistency across the **Kafka queue** and **PostgreSQL** database

**AI Full-Stack Developer** — January 2024 - January 2025
*Enterprise Technology(Mastercard Foundation), Arizona State University.* — *Arizona, United States*

- Contributed to the development of **MLOps environments** and pipelines for **large language model** (LLM) applications, deploying **Kubernetes** clusters on AWS using **Docker** and **Terraform**.
- Architected three full-stack platforms serving over **10,000+** users to build, compare, and interact with various LLMs using **AWS Bedrock**, **OpenSearch**, and **Llamaindex** with audio and image support.
- Implemented a Jenkins **CI/CD** pipeline for 100+ weekly builds, using AWS services like **ECR**, **ECS** and **S3**.
- Optimized **OpenSearch** database performance by refining schema designs and enhancing data ingestion processes, resulting in a **25%** improvement in query speed.

**Software Engineer II (Full-Stack)** — June 2020 - July 2023
*Allegion (Schlage).* — *Bengaluru, India*

- Led the optimization of database replication for multi-region full-stack deployments, utilizing **DynamoDB** and **Redis**, enhancing data consistency, caching and availability by **20%** in distributed environments.
- Deployed **Lambda functions** to process **2M+** records, increasing speed by **60%** through storage in **Clickhouse**
- Drove the migration of Engage web application to a microservices architecture with **Docker** and **Kubernetes**, enhancing system scalability to support **100,000+** concurrent connections, reducing latency by **25%**.
- Engineered a full-stack web application utilizing **React.js**, **Node.js**, **PostgreSQL** and **S3**, enabling the software team to centralize document storage and transition to online documentation.
- Developed an **Automation** Framework with **Selenium** and **Appium**, reducing manual testing efforts by **70%**.

## PROJECTS

**InfoFetchBot**. (link) *Python | Discord API | Open AI | AutoGen | NotionAPI* — *September 2024 - October 2024*

- Created a Discord bot that processes incoming messages, triggers web searches, and scrapes website content using AI agents, delivering concise summaries directly into Notion for streamlined data organization and retrieval.

**AutoDeploy**. (link) *Node.js | S3 | ECR | ECS | Redis | Web Sockets* — *January 2024 - February 2024*

- Developed a backend application to automate React project builds from GitHub URLs using ECS build servers, deploying static files to S3 and generating custom URLs with a reverse proxy for efficient serving.

**LiveCode Collaborator**. (link) *Web Sockets | React | Node.js | MongoDB | Express* — *July 2022 - September 2022*

- Created an online JavaScript coding IDE with real-time collaboration features using WebSockets and WebRTC, enabling users to develop and execute code collaboratively in shared coding rooms.

## EDUCATION

**Arizona State University** — Tempe, AZ
*Master of Science in Computer Science*; ***GPA: 4.0/4.0*** — *May 2025*