Rahul Shah

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EXPERIENCE

Software Engineer

Solutions Unified LLC.

- Designed a scalable file upload pipeline using pre-signed S3 URLs with chunked uploads, S3 multipart support and Lambda triggers, reducing core service load and improving file processing latency by 35%.
- Automated multi-service (Elastic Beanstalk, S3, DynamoDB) deployment using AWS CDK, reducing customer environment setup time by 75% through seamless integration with CloudFormation.
- Developed an admin dashboard using **React**, **Tailwind**, and **Go** backend services to monitor real-time usage metrics and system logs, enhancing system observability and reducing debugging time by 60%.
- Built a **notification service** to process usage data from client environments via **SNS** and **SQS**, triggering Lambda-based metering and Stripe integration for billing, reducing errors by 25%.

AI Full-Stack Developer

Enterprise Technology (Mastercard Foundation), Arizona State University.

- 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.
- Engineered a voice-enabled assistant by integrating Whisper for transcription and Amazon Polly for speech synthesis, allowing seamless bi-directional audio interaction with LLMs for accessibility-focused use case
- Architected a modular backend system supporting plug-and-play integration of third-party **LLM** providers, enabling flexibility in model experimentation without downtime.
- Created a multi-agent orchestration system using LangGraph and FastAPI, enabling chained LLM workflows for planning, memory, and tool use, reducing user interaction steps by 50%.

Software Engineer II (Full-Stack)

Allegion (Schlage).

- Drove the migration of an internal API from **REST** to **GraphQL**, optimizing query complexity and efficient data fetching, reducing the need for multiple API calls & improving developer efficiency by 35%.
- Led the integration of an automated CI/CD pipeline using Jenkins, Docker, and Kubernetes, reducing deployment cycles by 40% and implementing blue-green deployment for zero-downtime production updates.
- Developed an onboarding workflow using **React** and **Redux**, integrating REST APIs and custom hooks, improving task completion rates and reducing onboarding time by 60%.
- Built a middleware-based request tracing system in **Node.js** using OpenTelemetry, enabling distributed tracing across microservices and reducing debugging time by 40%.
- Designed and implemented an end-to-end testing framework using Selenium WebDriver and Mocha, enabling automated browser testing reducing manual QA efforts by 70%.

PROJECTS

Sep. 2024 – Oct. 2024 **InfoFetchBot** (link) | Python, Discord API, Open AI, AutoGen, NotionAPI

• 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 data organization and retrieval.

AutoDeploy (link) | Node.js, S3, ECR, ECS, Redis, Web Sockets

• 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.

TrackMate (link) | React Native, Node.js, MongoDB, GPS

• Built a React Native mobile app with GPS tracking, enabling users to record, store, and review travel routes with distance metrics; integrated secure user authentication and cloud-based route history storage.

TECHNICAL SKILLS

Languages & Frameworks: Go, Java, TypeScript/JavaScript, Python, FastAPI, React, Node.js, Spring Boot Cloud & Tools: AWS (EC2, API Gateway, S3, ECS, Bedrock), Kubernetes, Docker, Git, Jenkins, Selenium Data & Messaging: DynamoDB, PostgreSQL, MySQL, MongoDB, Redis, Kafka, RabbitMQ, SQS, SNS

EDUCATION

Sep. 2024 - Oct. 2024

Jul. 2023 – Aug. 2023

Bengaluru, India

June 2020 – July 2023

Jan. 2024 – Jan. 2025

May 2024 – Present

Tempe, AZ

Califon, NJ