

LI ZHANG

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WORK EXPERIENCE

Optum / UnitedHealth Group

01/2023 – Present

Associate Software Engineer (Azure, AWS, Terraform, Kubernetes, ASP.NET API, Angular, C#, JavaScript)

- Migrated chat agent applet from on-premises Kubernetes instance to Azure Kubernetes Service.
- Built an AWS Lex chatbot integrated with AWS Lambda, using CloudWatch to monitor and resolve latency issues.
- Configured Azure Front Door and Traffic Manager to improve global load balancing, and application availability.
- Automated infrastructure provisioning across AWS and Azure using Terraform, ensuring consistency and reducing manual intervention.
- Implemented both front-end and back-end features for Optum Insurance claim overpayment management system using Angular and ASP.NET API.

SKILLS

- **Tech Stack:** Azure, AWS, Terraform (IAC), Ansible, GitHub Action (CI/CD), Kubernetes, Docker, Linux.
- **Programming Language:** Python, Bash Scripting, C#, JavaScript, Typescript, Angular, SQL.

CERTIFICATES

AZ305 - Azure Solutions Architect Expert

AZ104 - Azure Administrator Associate

AWS Solution Architect – Associate

HashiCorp Certified: Terraform Associate (003)

CKA - Certified Kubernetes Administrator

Microsoft GitHub Actions Certificate (CICD)

PERSONAL PROJECTS

AWS Infrastructure Modernization (Terraform, VPC, ALB, EC2, Route 53, ACM)

- Automated the deployment of a dynamic web application using Terraform, provisioning AWS resources including EC2 instances, VPCs, subnets, and security groups.
- Used Ansible to automate and manage the configuration of the application servers.
- Designed a highly available architecture across multiple availability zones with an Application Load Balancer (ALB) and Auto Scaling Groups (ASG).
- Configured Route 53 and AWS Certificate Manager (ACM) for secure and efficient domain management.

E-Commerce Application Modernization (AWS, Docker, ECS, EKS, CI/CD)

- Containerized a web application using Docker and hosted images in Amazon Elastic Container Registry (ECR).
- Deployed services on AWS ECS using Fargate, ensuring seamless auto-scaling and fault tolerance.
- Implemented CI/CD pipelines using GitHub Actions to automate build, test, and deployment processes.

Serverless Contact Form (AWS Lambda, API Gateway, DynamoDB, SNS)

- Built a serverless contact form to process user messages using AWS Lambda, API Gateway, and DynamoDB.
- Configured SNS notifications to trigger real-time email alerts upon form submissions.
- Ensured high availability and security through IAM roles and API Gateway authentication mechanisms.

S3 Auto-Organizer: Date-Based File Management System (Python, Lambda)

- Automatically sorts uploaded files into date-based folders within Amazon S3 buckets.
- Leverages AWS Lambda to trigger organization functions when new objects are uploaded.
- Implemented in Python for reliable serverless execution with minimal configuration.

EDUCATION

South Dakota State University, Brookings, SD

01/2020 - 05/2022

M.S. in Computer Science

- **GPA:** 4.0/4.0