Zijie Zhou

Phone: +1 7038269289 | **Email:** zhou.zijie@northeastern.edu
GitHub: github.com/Zijie000 | **LinkedIn:** linkedin.com/in/zijie-zhou-bb265a1ab/

Education

Northeastern University Boston, U.S
Software Engineering System, M.S. May 2025

Arizona State University Tempe, U.S
Computer Science, B.S. May 2022

Tech Stack

Language: Python, Java, Go, JavaScript, SQL, Lisp
Frameworks: Spring/Spring boot, Gin,
Infrastructure as Code (IaC): Terraform, Packer, GitHub Actions, Jenkins
Cloud: Amazon Web Services (AWS), Google Cloud Platform(GCP), Kubernetes, Docker

Academic Project

Cloud Computing & Cloud Native (AWS) **Sep 2024 - Dec 2024**

- Developed and maintained a **RESTful API** user management system using **Golang**, **Gin**, and **GORM** (ORM), delivering efficient and scalable solutions.
- Using **Terraform** defines the **VPC** with multiple private and public subnets. The **RDS** database resides in a private subnet, blocking direct internet access to ensure data security. The core application is deployed in the public subnet.
- Configuring application's **load balancer (ELB)** and **Auto Scaling group** configured in the public subnet, with its domain linked to **Route 53** via an A record, using **TLS/SSL** for secure **HTTPS** encryption.
- Setting up the **S3 bucket** for user image storage, and **AWS Lambda** (serverless) is used to deploy an email verification function, enhancing the user experience and interaction flow.
- Using **Packer**, creating **EC2** images with **HCL** files, embedding a pre-configured Golang Gin RESTful API application to ensure efficient application delivery.
- Hosting the Golang web application source code and **Packer** files in a **GitHub repository**, with a **CI/CD** pipeline implemented via **GitHub Actions**. Each code change undergoes **integration testing**, which must pass before merging. Successful merges trigger Packer to build and upload the EC2 images to **AWS**.

Enterprise Software Design (Spring/Spring Boot) **May 2023 - July 2023**

I developed a Twitch-based derivative product, which allows users to save their favorite videos and recommends videos they might like. My responsibilities included building the backend business logic using Spring Boot and contributing to the development of the frontend with React.

- Developed a Twitch derivative product using **Spring Boot** and **React 5**, creating a user-favorites-based recommendation platform that retrieves video metadata from the Twitch API.
- Utilized **Spring MVC** framework to design and implement a multi-layered architecture as illustrated, including controllers, services, repositories, and database integration for a Twitch-based recommendation application with user authentication and data persistence.
- Implemented a robust user authentication and authorization system using **Spring Security**, streamlining the user registration and login processes.
- Enhanced application performance by incorporating **Spring Data Caching** with **Caffeine** to optimize data retrieval and reduce server load.

Personal Project

Automated Data Collection RPA for E-commerce Platforms **Mar 2021 – July 2021**

Developed a Robotic Process Automation (RPA) solution to automate large-scale data collection from Taobao and Ele.me. The RPA system continuously retrieves real-time product data from these retail platforms, ensuring up-to-date and accurate information for the business analytics department.

- Designed and implemented the **RPA** using Java in combination with **Selenium** and **Appium**, enabling automated data extraction from both web and mobile interfaces.
- Integrated the **RPA** with external **Android** devices through Appium, allowing the system to interact with graphical user interfaces (GUIs) on mobile platforms.
- Optimized the **RPA** workflow to handle large volumes of product data efficiently, minimizing downtime and ensuring continuous operation.