

ZHIWEI LIANG

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Education

Rice University - Houston, TX

Master of Computer Science: December 2022, GPA: 3.7/4.0

Arizona State University - Tempe, AZ

Bachelor of Science in Computer Science, May 2021, GPA: 3.8/4.0

Skills And Certificates

- **Programming languages:** Python, Go, JavaScript, TypeScript, C#, Java, C++, C, MATLAB, Assembly
- **Frameworks, tools, and techniques:** Git, Flask, Sanic, REST API, CI/CD, Linux, Terraform, Ansible, SaltStack, Packer, Object-Oriented Design, JSON, Serverless, Unity, Multi-Threaded Programming, Unit Testing, System Programming, Docker, Database ORM, Kubernetes, Message Queues
- **Cloud Platforms:** Akamai Compute (Linode), AWS, Azure, Heroku, Travis, Coveralls, GitLab, GitHub
- **Databases:** MySQL, PostgreSQL, DynamoDB, MongoDB, Neo4j, CosmosDB

Professional Experience

Software Engineer II, January 2023 – Present

Akamai Technologies, Inc. – Remote

- Led the team's effort for company-wide projects as a direct responsible individual.
- Collaborated with the upper stream API team and documentation team to provide the best experience to the customers.
- Developed developer tools, including Terraform Provider, CLI, Ansible Collection, Packer Plugin, SDKs (Python and Golang) for Linode.
- Maintained and tested legacy projects, Linode Docker Volume Plugin and LKE Driver for Rancher Kontainer Engine.
- Contributed to company-wide open-source projects including Linode CAPI Provider and Linode Kubernetes Node Decorator.

Cloud Engineer Intern, June 2022 – August 2022

PTC Inc. – Remote

- Prototyped with Azure services for possible use in production.
- Wrote code to contribute to Automation projects (based on Salt, Terraform, and Python), which configures Azure cloud infrastructure (e.g., Virtual Private Network, Virtual Machines, Databases).

Software Engineer Intern, June 2021 – July 2021

DASHEBOARD AI INC. (Sinatra) – Tempe, AZ

- Collaborated with other developers to identify and fix a number of bugs and errors in the backend system.
- Developed and maintained the backend of the website written in Python with Flask.
- Managed and migrated PostgreSQL database schema designs by Object-relational Mapping (SQLAlchemy, Flask-Migrate, and Alembic) technology.

Software Engineer Intern, January 2021 – April 2021

BusySquirrels Company – Remote

- Developed the frontend of the website, written in JavaScript with ReactJS framework.
- Developed the backend of the website with Python and Cloud Services (AWS EC2, S3, AWS API Gateway, AWS Lambda, AWS RDS, AWS DynamoDB, Elasticsearch, Redis).
- Reimplemented legacy modules in the backend application and reduced the size of code by more than 50%.
- Managed and migrated data in MySQL and DynamoDB (NoSQL) database with SQL and Python scripts.
- Developed and maintained CI/CD pipeline with GitHub Workflow and AWS CodePipeline.

Student Worker (Software Developer), May 2020 – December 2020

Arizona State University – Tempe, AZ

- Maintained python scientific computing packages (Neuronunit, SciUnit and Pyrfume). Improved reliability by adding test cases, identifying and fixing bugs.
- Set up automations for tests and document generation.
- Created pretty user guide documents with Jupyter Notebook.

Open-Source Contributions

Core Developer, Sanic Community Organization

- Sanic is a flask-like and high-performance Python web framework and server.
- Contributed to Sanic's code base and participated in community discussion.

Projects

- **Real-time Chat Application Demo**
A web chatting application built with ReactJS framework and Ably Realtime SDK as the frontend, Azure Functions app and Azure Cosmos DB as the backend.
- **Personal Website (zhiwei-liang.net)**
A simple website built with Python, Sanic Framework, CI/CD pipeline (GitHub Actions), Cloudflare CDN, and Linode Kubernetes Engine.
- **Pacman Game**
A group project that rebuilds the pacman game with Java Spark framework (backend) and web technologies, HTML, JavaScript, CSS (frontend). Served as tech lead in the group and was responsible for application architecture design and implementation.