

Ning Wang

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Programming Languages & Tools

- **Languages:** *Java, Python, SQL, GraphQL, TypeScript, JavaScript, Ruby, Bash*
- **Tools:** *REST, Spring Boot, Django, PostgreSQL, GraphQL, Git, Liquibase, Elasticsearch, Docker, Jenkins*
- **AWS:** *EC2, CDK, API Gateway, SQS, S3, CloudWatch, ECS, Fargate, CloudFormation, EventBridge*

Professional Experience - Backend / Full Stack

VMware - End User Computing, Software Engineer 07/2022-present

- Working on customer-facing Microservices. Collaborating with PM, UI, Support teams closely to work out roadmaps and requirements, drive deliveries for features and products.
- Built a Marketplace feature for **100+** Enterprise users to select **40+** dashboards and monitoring metrics. Enabled searching by name and description, saving users' time spent on selecting.
- Built a Custom Role Framework for **100+** Enterprise users to help managing **200+** RBAC based scopes. Realized customer access classification based on roles and subscription plans, secured user files by isolating read/write/share access. Enabled super admins with role assigning functionalities.
- Enriched user account information by building **GraphQL** queries on top of **RESTful APIs** to help UI team retrieving user info through multiple microservices, saved data fetching time, simplified UI workload.
- Leveraging **Spring Boot, Java, PostgreSQL, GraphQL, and Ruby** to build the backend code for business logic. Built **APIs** for internal and public use cases.
- Designed DB schemas and data migration strategies. Used **Liquibase** for schema and data version control.
- Utilizing **AWS** components to build the Cloud Infrastructure for our **Microservices**. Using **SQS** for message queueing, **API Gateway** for API monitoring, and **RDS** for database management.

Amazon Web Services - AWS Connect, Software Engineer Intern 07/2021-10/2021

- Built a **Microservice** to execute Phone Call History Report, decoupled team specific API based service.
- Leveraged **CDK** to build a **Serverless AWS** based **Cloud Infrastructure**. Utilized **EventBridge** to absorb and route call ID, used **SQS, ECS, Fargate** to process asynchronous events, stored reports in **S3** buckets.
- Utilized **Java** to implement backend service code, used **TypeScript** to define **AWS CDK** infrastructures.
- Used **Ruby** to configure internal monitor dashboard, provided real-time service metrics report to the team.

VMware, Inc., Product Engineer Intern 05/2021-07/2021

- Implemented a multi-version **Python/Pytest** compatibility module for team's development/testing framework.
- Cleaned up **4 years** old legacy code base for 3 internal projects. Designed plugins to improve testing efficiency, implemented **PyTest** plugins/hooks to boost the overall testing efficiency up by **5%**.
- Built a status monitoring tool, enabled VMware teams with better observability on test phases and logs.
- Leveraged **JavaScript** to build the frontend, utilized **Django REST** and **MangoDB** for backend and database development, used internal **CI/CD** pipelines for deployment.

Alibaba - Summer of Code Program, Software Apprentice 07/2020-08/2020

- Enhanced the performance of the write-to-disk phase for the **Apache Flink** backend. Implemented an in-memory key-value storage model to replace the traditional memory map controlled write mechanism.
- Leveraged **Flink** SkipList memory-to-disk storage with LMDB B+ Tree in-memory storage. Designed experiments and researched on key performance metrics, contributed autonomous-write module to project prototype, improved the average QPS from **400K/s** to **450k/s**.

Education

University of Washington (Seattle, WA) 07/2022

- Electrical and Computer Engineering, Master of Science, GPA: 3.82/4.0

Xidian University (Xi'an, China) 06/2019

- Telecommunications Engineering, Bachelor of Engineering, GPA: 3.7/4.0