Xuanyi Zhu

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Software Engineer at Oracle Cloud with over four years of full-stack development experience specializing in back-end technologies. Domain expert in Kubernetes and various cloud platforms through experience gained at multiple SaaS companies.

Skills

Languages: Java, Python, C++, C, Terraform, PHP, JavaScript, SQL, CSS, HTML, Haskell, R, MATLAB, Perl, Ruby
Tools: Kubernetes, Docker, AWS, MVC, Spring, Flask, RESTful, MongoDB, MySQL, Tensorflow, WebGL, Linux

Work Experience

Oracle Cloud **Seattle, WA** **01/2021–Present**
Software Engineer *(Container Engine for Kubernetes, Java, Terraform, Dropwizard)*

- Innovated and architected the PDE application, which containerizes Oracle Kubernetes service components and dependencies into a VM. Eliminated the need for competition and coordination over a shared environment, empowering each developer with their own personal local end-to-end development environment. Facilitated rapid iteration, leading to heightened efficiency, productivity, and widespread adoption among 300 engineers for their daily software development in the organization.
- Designed the foundational framework for Oracle Kubernetes service, optimizing testing processes and incorporating behavior-driven development principles. Addressed challenging scenarios not easily tested in the integration environment by effectively translating user stories into a comprehensive test suite, resulting in a remarkable increase in overall coverage from 59% to 99.8%.
- Implemented the Cycling Nodepool service to strengthen the nodepool workflow, which automatically and seamlessly replaces customers' worker nodes with the latest configuration and ensures instances are kept up-to-date and secure. Eliminated the burdensome monthly task of manually updating a fleet of nodes while greatly improving compatibility and security for customer Kubernetes nodepools.
- Standardized and automated region build as a service, leveraging the CI/CD pipeline and terraform to deploy the cloud infrastructure components. Improved touchless operations and reduced the region build time from 6 weeks to 4 hours.

Amazon Inc. **Seattle, WA** **07/2019—01/2021**
Software Engineer *(Java, DynamoDB, Kinesis, Lambda, S3, SQS, Coral, Herd, DataPath, Gurupa, OOD)*

- Launched a system that collates books and presents the collection pages to Amazon customers. Invented a Next Book In Series service to encourage additional purchases, enhancing customers' book shopping and reading experience, as well as increasing customer glance views by 43% and company profits by $3 million.
- Designed, developed, and launched a scalable information ingestion system that curates data and publishes book series to the Amazon catalog data warehouse, enabling 10+ downstream features.
- Redesigned the data validation service, leveraging multithreading, asynchronous computation, and batch processing techniques to increase service performance by 71%.
- Implemented an operational metrics collection service, integrating it with the internal system to enable data flow tracking and analysis, reducing manual efforts from over 2 days to just 2 minutes.
- Maintained and enhanced the internal metadata querying system, aligning it with the latest Amazon infrastructure and AWS services, resulting in monthly savings of millions of dollars for the Kindle division.

Zoom Video Communications **San Jose, CA** **05/2017–08/2017**
Software Engineer Intern *(Python, Tensorflow)*

- Built neural network models (MLP, CNN, LSTM) for classifying noise and human sounds, aiding the audio team in achieving noise reduction/cancellation goals with 97% accuracy.
- Applied normalization and regularization techniques with optimal parameters to address overfitting issues.
- Optimized and evaluated performance via feature selection, k-fold cross-validation, precision, and recall.
- Presented analysis results to executives and authored a tutorial book on ML/AI concepts and resources.

Education

University of Illinois at Urbana-Champaign **08/2014 – 05/2019**
Bachelor of Science in Computer Science ***GPA:3.81/4.0***
Master of Computer Science in Computer Science ***GPA:3.62/4.0***
Relevant coursework: • Machine Learning & Artificial Intelligence • Database & Distributed Systems