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 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 onerous monthly process of manually updating a fleet of nodes, and significantly enhanced customer Kubernetes nodepool's compatibility and security.

• 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 six weeks to four hours.

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

• Developed a system that collates books and presents the collection pages to Amazon customers.

• 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 70 percent.

• Developed a Next Book In Series service to encourage additional purchases, enhancing customers' book shopping and reading experience, as well as increasing customer glance views and company profits.

• Implemented an operational metrics collecting service and integrated it with the internal system to add data flow tracking and analyzing functionality.

• Maintained and enhanced the internal metadata querying system, adapting it to 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