

Max Lai

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SKILLS

Programming Languages: Java, Python, C#, TypeScript

Libraries & Frameworks: Spring Boot, Django, Flask, Angular

Tools & Technologies: AWS, Spring Cloud Data Flow, Kafka, Docker, Kubernetes, SQL, Git

EXPERIENCE

Technical Lead/Big Data Developer II

March 2023 - Present

Penske

Remote

- Led a distributed team of 7 software engineers in developing and maintaining a critical internal user-facing application using Java, Spring Boot, TypeScript, and Angular. This application plays a pivotal role in onboarding businesses onto a fleet management platform, currently ingesting telemetry from nearly 200k vehicles.
- Spearheaded the development of UI and service layers for an internal support application, leveraging AWS generative AI services to automate responses to common inquiries and streamline access to team-specific resources and processes.
- Implemented a seamless cross-cloud migration of multiple UI and microservice applications to Tanzu Kubernetes, while ensuring continuous service availability by maintaining cross-domain communication.
- Achieved significant cost savings by migrating multiple applications querying telematics data from VMware MySQL to Amazon Aurora. Maintained data integrity through strategic deployment scheduling and implementation of Change Data Capture with Kafka streams to track CDC events during data import.

Big Data Developer I

March 2021 - March 2023

Penske

Remote

- Engineered high-performance polling applications using Java and Spring Boot, integrating external telematics providers into a fleet management platform processing over 260 million messages daily.
- Optimized a data pipeline platform by refactoring and retiring existing streaming components, resulting in a 64% reduction in Kafka connections, decreased cluster usage, and a 30% reduction in annual operating expenses.
- Developed vehicle locator and geofencing RESTful APIs using Java, PostgreSQL, and PostGIS, enabling real-time fleet location auditing through vehicle telemetry and geotemporal data.
- Enhanced application uptime and security by externalizing environment-specific properties and integrating with Spring Cloud Config Server, eliminating the need for rebuilding applications with configuration changes.

Software Engineer

April 2020 - March 2021

DXC Technology

Remote

- Developed and maintained a cloud-native learning management system (LMS) application featuring external API integration, federated search, and social sharing capabilities.
- Built scalable back-end applications and service layers using Python, Django, RabbitMQ, and PostgreSQL, responsible for processing hundreds of thousands of user transactions daily with high reliability.
- Improved application performance and reliability by standardizing API architecture and promoting code reusability through shared library externalization.

QA Automation Engineer

July 2019 - April 2020

Xcira, LLC

Tampa, FL

- Automated and reduced the duration of regression testing processes by 95% through a Python and Selenium WebDriver-based test suite for new releases, improving release cycle efficiency and software quality.
- Developed an operational support application using Python and PyInstaller, facilitating proactive identification and resolution of production issues through automated web client functionality validation.

CERTIFICATIONS

AWS Certified Cloud Practitioner

2023

AWS Training & Certification

EDUCATION

B.S. Computer Science

2021

Western Governors University