

Roman Wu

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Technical Skills

Programming Languages: Java, Python, SQL, PL/SQL, NoSQL, GraphQL, JavaScript/TypeScript, Shell Scripting, VBA

Technologies: Spring Boot, Spring MVC, AWS (EC2, S3, RDS, Lambda, CodePipeline), Redis, Docker, Kubernetes, Jenkins, Databricks, MyBatis, Hibernate, Nginx, RabbitMQ, Zookeeper, Mulesoft, Oracle, Git, MySQL, OAuth2, Postman, MongoDB

Certifications: AWS Certified Solutions Architect Professional, Databricks Certified Data Engineer

Experiences

Business Analyst | McKeil Marine Ltd, Burlington, ON

Jun 2024 – Present

- Developed a **distributed pricing model** in Python, integrating **21 real-time data sources** like fuel prices and weather, optimizing vessel pricing, and increasing overall profitability by 5%, providing a key competitive advantage.
- Spearheaded an automated Tangible Common Equity system using **AWS (EC2, RDS)** and Java, resolving 95% of discrepancies, boosting data accuracy by 20%, and improving efficiency for 20+ users daily.
- Led **database migration to Databricks**, implementing Java-based solutions to ensure 100% data integrity, enhancing analytics accuracy, and improving decision-making, leading to more informed business strategies.

Software Engineer | Prologic Consulting, Markham, ON

Jan 2023 – Jun 2024

- Architected a Java-based **RESTful API** processing 500,000+ daily requests, optimizing queries and deploying **Redis caching** to maintain **99.9% uptime**, ensuring system reliability and enhancing user satisfaction significantly.
- Led the transaction from monolithic to **microservices architecture** using Java and **Spring Boot**, cutting deployment time by 30% and improving scalability, fault tolerance, and maintainability, resulting in greater operational efficiency.
- Innovated deployment workflows by integrating **Jenkins, Docker, and AWS CodePipeline**, cutting deployment failures by 20% and boosting release cycle reliability by 15%, improving development speed and quality.

Software Engineer Intern | Sojo Canada Inc., Toronto, ON

Sep 2022 – Dec 2022

- Engineered a Java-based **microservices architecture** for an e-commerce platform, enabling seamless order tracking and payment processing, leading to a 15% increase in sales in the first quarter post-launch.
- Designed and implemented backend services for a SaaS platform on **AWS (S3, RDS, Lambda)**, optimizing data processing pipelines and leveraging **AWS auto-scaling** features to improve reliability by 18% for 1000+ users.
- Optimized backend using **Spring MVC** and **Hibernate**, applying lazy loading, connection pooling, and query optimization to improve efficiency and reduce response times. Increased scalability by 25% over the previous system.

Operations Analyst Intern | Harvest Fund Management, Remote

Sep 2021 – Dec 2021

- Optimized a financial database using **Oracle** and **ETL processes**, improving data accuracy by 20% and enhancing accessibility for 15+ analysts with real-time analytics, supporting informed financial decisions.
- Automated reconciliation** of trade and cash positions using Java, VBA, and Python, reducing manual processing errors by 40% and speeding up the month-end close process by 2 business days, improving reporting speed.

Projects

VessMark | An Unpublished Financial Services Platform

- Developed a scalable crowdfunding platform using the SSM framework and **microservices architecture**, deployed on **AWS**. Secured with **Spring Security** and **OAuth2**, built **RESTful APIs**, used **MyBatis** for database interactions, and integrated **Redis** for caching. Optimized with **GraphQL** and **DataLoader** to **resolve N+1 query issues** efficiently.

MeetCopilot | An Unpublished Meeting Answer Platform

- Developed a web application using **React, GraphQL, and Spring Boot**, integrating OpenAI embedded models and Whisper for real-time transcription. Built a local **Chroma vector database** for personalized content retrieval and deployed on cloud infrastructure. Secured with **Spring Security** and optimized query performance with GraphQL.

Education

University of Waterloo - Bachelor of Mathematics; Waterloo, ON

2020 – 2023