

Chengyu(Andy) Bao

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Education

Georgia Institute of Technology – Atlanta, GA Aug 2021 - Dec 2022
M.S in Computational Science & Engineering, GPA 4.0/4.0

University of Washington – Seattle, WA Sep 2017 - Apr 2021
B.S in Mathematics, GPA 3.6/4.0

Work Experience

Bank of New York Mellon (Full-Stack Developer) - Orlando, FL Sep 2023 – Present

- Developed a sophisticated monitoring system with a custom diffing algorithm to continuously evaluate data consistency across multiple regions. Designed a new message workflow utilizing JMS Template and IBM MQ to correct data discrepancies. Built the user interface with Angular Material and PrimeNG. Implemented seamless broadcasting of data anomalies using WebSocket. Utilized virtual scrolling, lazy loading, and asynchronous tasks to handle over 30,000 daily data points smoothly.
- Contributed to data migration from legacy clearance system to the new collateral engine. Developed an algorithm to identify incorrect mapping in over 100,000 business data that were scattered across multiple tables and regions. Collaborated closely with the business team to rectify incorrect data.
- Participated in data migration from Sybase to Oracle, contributed to the optimization of complex SQL queries and stored procedures. Identified legacy queries with high cost and boosted querying time by 20%.
- Led the initiative to develop the first interactive rehypotheication system, which aims to provide intuitive visualization of loan flow for clients. Developed multiple REST API endpoints to empower clients in effortlessly track lending allocation, settlement dates, and other relevant details.

Panzura (Software Development Intern) - San Jose, CA May 2022 – Dec 2022

- Conducted real world Ransomware attacks in isolated VM. Utilized Confluent and Kafka to access, collect, and manage malware manipulation data as continuous, real-time streams.
- Utilized Python for in-depth data analysis, enhancing algorithms to detect Ransomware more accurately at an early stage, achieving a remarkable false/no detection rate of 2.5%.
- Collaborated closely with development and data teams to assess and mitigate potential vulnerabilities, ensuring the integrity of clients' data against evolving cyber threats.

Panzura (QA Automation Intern) - San Jose, CA July 2021 – Aug 2021

- Led the migration of 17,000+ test templates and related test case information from an on-premises local server to Atlassian Jira Cloud using Java Selenium.
- Implemented cost-saving measures by transitioning away from the local server, while enhancing information security and improving agility and flexibility in the testing process.
- Contributed to the optimization of testing practices, facilitating a smoother software development lifecycle within the organization.

Personal Projects

Quiz App Jan 2023 – July 2023

- Designed and developed a robust online quiz platform using Spring Boot framework. Implemented user and admin systems for seamless user experience and efficient management of quizzes.
- Built the application adhering to the microservice architecture using Eureka and Spring Cloud.
- Used Hibernate and Spring Data Repository to manage MySQL and MongoDB databases. Stored unstructured data with Amazon S3 Buckets. Used OpenFeign for synchronous communication and RabbitMQ for asynchronous communication among internal microservices.
- Integrated the system with Spring Security to efficiently manage user authentication and authorization.

Skills

Programming: Java, React, Node.js, Python, Angular, Spring Boot, Spring Cloud, Hibernate, Selenium

Technical: AMQP, SQL, MongoDB, Linux, Shell, Docker, AWS (DynamoDB, S3, RDS, IAM)