

# (Leo) Wanquan Zhang

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## EXPERIENCE

### Senior Associate Software Engineer

Feb 2025 – Present

DISCOVER FINANCIAL SERVICE

Chicago, IL

- Led a redesign project migrating the Discover Home Loans Secure Document Upload site from FreeMarker to **React**, introducing new UI designs that improved user experience, accessibility, and performance
- Engineered a secure **Spring Boot** backend to handle high-volume document uploads with integrated virus scanning and automated email notifications, improving processing speed and reliability for home loan customers
- Implemented a **Java**-based NMLS ID capture and validation system for client-agent email communications, ensuring regulatory compliance and reducing invalid submissions

### Associate Software Engineer

Aug 2023 – Feb 2025

DISCOVER FINANCIAL SERVICE

Chicago, IL

- Improved Discover Personal Loans Application pages using **React** to enhance user flow and reduce abandonment rates
- Developed custom **Adobe Experience Manager** (AEM) components to migrate the Personal Loan Resource Center from WordPress, reducing platform expenses and streamlining content management
- Implemented dynamic **SEO schema** generation for Discover Personal Loan pages, increasing organic traffic and boosting search rankings through optimized metadata
- Enabled tracking of referring web pages to the personal loan application page, providing actionable insights into user journeys and supporting data-driven optimizations

### Software Engineer Intern

June 2022 – Aug 2022

DISCOVER FINANCIAL SERVICE

Riverwoods, IL

- Integrated **Redis** as a caching layer for cryptogram management, reducing Postgres queries and improving transaction throughput
- Developed a **Spring Boot** endpoint that validated and reformatted over 1 million account update requests from card issuers
- Leveraged **RabbitMQ** and **Kafka** for high-throughput distribution of re-processed account update requests

## EDUCATION

### University of California, San Diego

Sept 2019 - June 2023

Bachelor of Science in Mathematics-Computer Science

GPA: 3.6

## PROJECTS

### DevSphere – Personal Website

May 2024 - Sept 2024

Link: <https://github.com/Leo10250/Dev-Sphere>

- Built a personal website using **Vite**, **TypeScript**, and **SCSS**, achieving rapid build times and a clean, modular codebase
- Implemented responsive UI/UX design for seamless user experiences across devices, validated through mobile-first testing
- Deployed the site to GitHub Pages, ensuring streamlined deployment and easy access for demonstrations

### ReadSense – Book Category Predictor

Sept 2022 - Dec 2022

Link: <https://github.com/Leo10250/ReadSense>

- Developed a machine learning model in **Python** to predict book categories from Amazon user reviews
- Enhanced text processing with **TF-IDF** and lemmatization, boosting classification accuracy to ~80% on a 10,000-review dataset
- Demonstrated real-world applicability by integrating the model into a prototype web interface for live testing

### HuffComp – File Compressor

Jan 2022 - Mar 2022

Link: <https://github.com/Leo10250/HuffComp>

- Developed a Huffman Encoding-based file compression tool in **C++**, reducing file sizes by ~40% on average
- Optimized the compression algorithm with a compact header for lossless decompression, minimizing overhead
- Demonstrated efficient compression on text files, images, and logs, showcasing its versatility

### Calm Leo – Discord Bot

June 2021 - Sept 2021

Link: <https://github.com/Leo10250/Calm-Leo>

- Developed a **Python**-based chatbot with moderation tools and interactive mini-games to enhance server engagement
- Integrated APIs to retrieve and display data from Reddit and Urban Dictionary for real-time information access
- Automated community interactions by engaging with active server members, improving user retention and participation

## SKILLS

**Frameworks:** React, Spring Boot, Adobe Experience Manager (AEM)

**Programming:** Java, JavaScript, HTML/CSS, TypeScript, Python, C/C++, ARM Assembly, PostgreSQL, AWS, REST APIs, Postman

**Certificates:** AWS Practitioner Certificate