XIANGCAN (SHAWN) LI

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EDUCATION

University of Illinois Urbana-Champaign **Expected Dec. 2023**
BS in Computer Science; dual degree in Applied Mathematics and Statistics **GPA: 4.0/4.0**

TECHNICAL SKILLS

Languages: Java, Python, C/C++, Objective-C, HTML5&CSS3, JavaScript/TypeScript, Ruby, Go, Haskell
Frameworks: gRPC, Docker, Google Cloud, AWS, MongoDB, Redis, MySQL, Java Spring Boot, Rails, PostgreSQL, Git
Web Development: Node.js, Next.js, Express, React.js, Redux, Webpack

PROFESSIONAL EXPERIENCE

DRW Jan. 2023 – Present
Software Engineer Intern, eXchange Data Team Chicago, IL

- Improved database query efficiency and standardized trading signals, resulting in a reduction of trading overhead.
- Optimized database records for financial instruments by bucketing data into different numerical ranges using **Ruby on Rails** and **PostgreSQL**, leading to a 40% increase in data retrieval efficiency.
- Translated and simplified data from various exchanges into "Add, Update, Remove, and Trade" (AURI) messages using **Java**, reducing trader operation time by 20 minutes per transaction.

Google Sept. 2022 – Dec. 2022
Software Engineer Intern, Google Cloud Platform, Apigee Integration Platform Sunnyvale, CA

- Designed a new read-and-write mechanism with **Java**, **gRPC**, and **Protocol Buffers**. Utilized the new user logging system to tackle the lost update issue caused by race conditions.
- Integrated a new storage system into the in-production service to enhance the scalability of the product by 200%.
- Implemented a dual-write data migration workflow to ensure the robustness of the assets across 64 regionalized databases.
- Streamlined user authentication by implementing a token-based secure Web API, handling 2000 requests daily.

Meta (Facebook) May 2022 – Aug. 2022
Software Engineer Intern, Facebook App Pillar, Facebook Core Ad Experience Menlo Park, CA

- Developed a tool to visualize millions-scaled distributed data warehouses, which improved the efficiency of analyzing and debugging invalidation reasons for Ad traffic by 80%. Set up frontend in **React.js** and backend in **Hack**.
- Implemented a UI portal to optimize the creative process for Ad experience, which saved 5000 minutes per day for engineers.
- Enhanced Ad creators' workflow by introducing a centralized mechanism for Ad visualization, which saved 40 minutes per Ad for creators. Prepared one-stop configuration settings in **C++** to declutter Ad overview streamline, wrote backend in **Hack**.
- Solved a throttle challenge for query limits (1750/min) by designing a **height-balanced N-ary tree** and a **backtracking search process**. Aggregated 400 queries/day by accessing objects of the data structure and decreased query number from 2500/min to 200/min.

B-soft May 2021 – Aug. 2021
Software Engineer Intern, E-commerce Team Hangzhou, Zhejiang (China)

- Developed and maintained an enterprise-grade online shopping web platform to support billions-scaled customer order traffic.
- Built a front-end website of the platform with **React.js** and a server-side backend microservice using **Java Spring Boot** framework, **Spring MVC** model, and **PostgreSQL** database.
- Resolved website duplicate order issues by developing a state machine of four states. Prevented future duplicates by supporting front-end debouncing and implementing error handling logic of a distributed lock based on **Redis**.
- Optimized platform stocking logistics by detecting and removing erred, outdated, or unpaid orders daily. The newly established workflow reduced the run time of the loading and placing orders by 30%.

PROJECT EXPERIENCE

Yijia Health Management – Health Management Website Sept. 2020 – Jan. 2021

- Launched a one-stop health management website to allow customers to check account details and make appointments using **React.js** and **Java Spring Boot**, which reduced each user's time to 30 minutes per event.
- Enhanced the performance of business order operations from 30 seconds to 10 seconds by utilizing Stored Procedure methods in **Oracle SQL**.
- Deployed multiple threads to segment and export data to CSV files, increasing writing efficiency by 30%.
- Updated the business data regularly by running timing tasks daily in **Java**, which expedited the process for financial statistics queries and analysis by 20%.