Xinhe (Zander) Xu

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Professional Experience

Intuit   01/2024 – Present

Software Engineer – QuickBooks Fintech Money Payments team

- Designed and implemented a high-volume reconciliation system between the Payments system and QuickBooks Online using **Kafka** for streaming and **Splunk** for anomaly detection, ensuring data consistency and triggering alerts on mismatched transactions.
- Integrated **LLM** models into QuickBooks using JavaScript, TypeScript, React, and Python to dynamically customize Sales Overview pages and automate invoice content generation, enhancing user experience and projected to generate millions in revenue.
- Created a new **React**-based one click sign-up system for QuickBooks' Instant Deposit, increasing user registrations by **55%** generated **millions** in revenue.
- Implemented a high-performance Deposits List page for mid-market users using **JavaScript** and **React**, capable of handling large data volumes. Optimized rendering with **react-window** and efficient pagination, enhancing user experience and data visibility.
- Developed an automated testing system for multiple plugins using **Playwright** and **React Testing Library**, increasing test coverage by and reducing manual testing time, resulting in more reliable deployments and faster development cycles.
- Utilized **Rego** and **Open Policy Agent (OPA)** to enforce Role-Based Access Control across application pages, enhancing security and leading to a **25%** increase in product registrations from small and medium-sized enterprises.
- Implemented a real-time event tracking system using **React**, **JavaScript**, and **Amplitude** to monitor user interactions. Created custom tracking hooks to capture and analyze user behavior, enhancing data visibility and informing product decisions.

University of Illinois Urbana-Champaign   08/2022 – 12/2023

Research Assistant (software development) – INCAS/ MIPS Data Platform Development

- Utilized **Selenium**, **Python**, and **Playwright** to build a scalable data collection system, efficiently scraping dynamic content (text, images, and videos URL) from platforms like Twitter, news websites, and TikTok, storing over **100,000** records in **Redis**.
- Researched and implemented a multi-model algorithm combining **social network analysis**, **natural language processing**, and **graph network modeling** to track and analyze information dissemination paths on social media.
- Built an interactive **React**-based visualization platform featuring 3D/2D influence trees and information flow diagrams, increasing platform engagement and scaling the user base
- Developed a comprehensive **machine learning pipeline** integrating data preprocessing, multi-model training, and multi-threaded execution with deployment using **Docker** and cluster setups.
- Contributed to the optimization of a **Belief Embedding Model** for user ideological scoring, integrating **BERT** for advanced language understanding, **Segment Trees** for computational efficiency, and **Variational Graph Auto-Encoders (VGAE)** for relationship modeling.
- Automated data scraping and classification workflows to ensure timely delivery of structured data for social network analysis.

Intuit   05/2023 – 08/2023

Software Development Engineer Intern – QuickBooks Money Payments Team

- Developed a **React**-based deposit list and tracker with data filtering and download functionality, improving user satisfaction scores.
- Implemented a deposit management feature using **Spring Boot** and built **RESTful APIs** to update and manage deposit statuses, reducing failure rates and improving search speed.

Amazon   02/2022 – 08/2022

Software Development Engineer Intern – Customer Search Service Team

- Developed unit and functional tests for the customer search platform and debug tool using **Java**, **JUnit**, and **TestNG**, ensuring comprehensive test coverage and CI/CD integration, which reduced the AFS FT failure rate from **2%** to **0.5%**.
- Refactored and updated legacy features of the **Asin Faceout Debug** tool using **Java**, through code optimization and module refactoring, improving modularity and maintainability, resulting in a **20%** increase in debugging efficiency.
- Designed and developed a debug tool using **Java** and **Kata**, incorporating RESTful APIs and asynchronous handling to improve the team's on-call experience, accelerating error tracing by **15%**.

Technical Skills

Programming Languages: Java, Swift, C#, JavaScript, TypeScript, Python, C++
Database Systems: MySQL, MongoDB, PostgreSQL, MongoDB Atlas, Redis, Spark/PySpark/SparkSQL
Other Tech Skills: AWS, React, React Native, Kubernetes (K8S), Kafka, Hadoop, Docker, Spring/Spring Boot, Django, NLP, Deep Learning, LLM, Linux

Education

University of Illinois at Urbana-Champaign   Urbana, IL
• **Master of Computer Science**, GPA: 3.90/4.00   *08/2022 – 12/2023*
• **Bachelor of Science in Statistics & Computer Science**, GPA: 3.88/4.00   *08/2018 – 05/2021*