Yujian (Richie) Zhou

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EDUCATION

TBD *TBD*
Master of Science in Computer Science Sep. 2024 – May 2025
University of Wisconsin - Madison *Madison, WI*
Bachelor of Science in Computer Science Sep. 2020 – Dec. 2023

EXPERIENCE

Software Engineer Intern, Northern Trust *Chicago, IL*
June 2023 – August 2023

- Developed and optimized algorithms in **Java and C++** to enhance the computational efficiency of NT's Goals Driven Wealth Management platform, leading to an 8% increase in transaction processing speed.
- Implemented and fine-tuned **RESTful APIs using Spring Boot** for efficient data communication within investment reporting trade model microservices, achieving a 15% enhancement in system responsiveness.
- Conducted quantitative analysis and applied statistical techniques in **C++** to optimize cloud-based services, resulting in improved system reliability and a 12% increase in uptime.
- Architected and executed complex **SQL queries and data models in Snowflake**, leveraging advanced data analysis and processing skills to accelerate data extraction for investment reporting by 30%, supporting swift data-driven decisions.

Software Developer Intern, Rockitcoin *Chicago, IL*
August 2022 – March 2023

- Revamped Rockitcoin's user authorization interface for mobile and web platforms using **TypeScript with React**, elevating security and usability, resulting in a 20% increase in user retention rate.
- Designed intuitive user interfaces for a user base of over 8,000 using **TypeScript with React**, focusing on user-friendly design and efficient real-time data interaction, leading to a 35% improvement in user satisfaction.
- Improved UI rendering speed by 10% through debouncing in **React**, effectively limiting API requests from text fields.
- Adopted **HashMap** data structures for efficient frontend user data management, achieving a 20% improvement in data retrieval speeds.

Full Stack Developer Intern, UNFCU *New York, NY*
May 2022 – August 2022

- Enhanced the dynamic saving rate recommendation page using **JavaScript, HTML, CSS, and PHP**, boosting savings account enrollment by 3%.
- Utilized the **Next.js** framework to architect and deploy intuitive entry pages, streamline navigation, and cohesively convey company culture, culminating in a measurable 30% uplift in customer satisfaction rate.
- Implemented **Python** scripts to automate loan document data extraction, enabling efficient keyword retrieval and streamlining team operations, leading to a 30% faster deployment cycle.
- Maintained **SQL** databases with over 150,000+ entries, creating an infrastructure for real-time reporting of key metrics like customer satisfaction, annual revenues, and sales retention rates, providing valuable insights to stakeholders.

PROJECTS

Weather Stream Analytic Nov. 2023

- Implemented a **Kafka producer** for data ingestion from weather stations and a **Kafka consumer** with exactly one message processing to ensure data integrity for web dashboard summaries.
- Utilized **Spark** Streaming for real-time data processing, generating datasets for ML applications in weather forecasting.
- Maintaining data accuracy and developing predictive models for weather analysis, leveraging **Spark's** capabilities for dynamic temperature averaging and forecast modeling.

Five Course Bird Feeder Spring 2023

- Developed a responsive front-end Interface using **TypeScript with React**, fascinating user interactions through live and recorded video streaming of the user's bird feeder.
- Implemented a versatile backend **Spring Boot API** supporting dynamic bird feeding schedules, user profile management, and real-time streaming of bird feeder cameras, enhancing user engagement and interactive experience.
- Integrated ML and image labeling techniques using **Python (Tensorflow)** to analyze bird visitation patterns, generating insightful statistics on bird species, frequency of visits, and visitation times displayed through interactive graphs and tables.

Online Shop Summer 2022

- Developed an intuitive online shopping platform using **Spring Boot**, enhancing the shopping experience for users.
- Utilized the **Redis** in-memory data structure to facilitate real-time product search and optimize shopping cart functionality.
- Modified the **JavaScript API** to streamline communication between buyers and sellers, improving transaction processing.

TECHNICAL SKILLS

Programming Languages: Java, C/C++, Python, R, SQL, JavaScript, TypeScript
Frameworks and Libraries: React, Vue, Spring Boot
Tools and Technologies: HTML, CSS, Cassandra, Kafka, Spark, Snowflake, Firebase, Redis, NodeJS, Docker, Kotlin