

Yujian (Richie) Zhou

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EDUCATION

University of Wisconsin-Madison GPA: 3.8/4.0

Madison, WI

Bachelor of Science in Computer Science and Data Science

September 2020 – Anticipated December 2023

Courses: Data Structure and Algorithms, Artificial Intelligence, Computer Graphics, Database Management Systems, Operating Systems, Software Engineering, Virtual Reality, Data Science Programming, User Interfaces, Big Data, and Mobile System and App.

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 **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 **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 Analytics

November 2023

- Implemented a **Kafka** producer for data ingestion from weather stations and a **Kafka** consumer with exactly once 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 - <https://github.com/arunike/CS506-Frontend>

Spring 2023

- Developed a responsive front-end Interface using **React**, fascinating user interactions through live and recorded video streaming of 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 - <https://github.com/arunike/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.

SKILLS

Programming Languages: Java, C/C++, Python, R, and SQL

Tech Stacks: JavaScript, TypeScript, HTML, CSS, React, Vue, Spring Boot, Snowflake, Firebase, Redis, NodeJS, Docker, & Kotlin.