

Jingxian Chai

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Education

University of Minnesota, Twin Cities

Minneapolis, MN

Bachelor of Science, Computer Science | GPA: 3.89/4

Sep 2021 - Dec 2023

Coursework: Software Engineering, Algorithm and Data Structures, Deep Learning, Machine Learning, Artificial Intelligence, Cloud Computing, Operating System, Parallel Computing, Data Mining, Database System, Cryptology

Professional Experience

Full-stack Engineer (Freelance) at Yiy Sing Toys, Malaysia (remote) | yiysing.com

May - Aug 2023

Next.js, TypeScript, Tailwind CSS, tRPC, Prisma, Clerk, PlanetScale, Stripe, AWS S3

- Revamped the e-commerce website using Next.js, reducing page load time by 50%, enhancing customer experience.
- Utilized Next.js Incremental Static Regeneration for product listing pages, optimizing application performance.
- Implemented a database connection to PlanetScale using Prisma and managed product image storage with AWS S3 buckets.
- Designed an intuitive UI with Tailwind CSS, simplifying user operations and improving user experience.
- Integrated Stripe Checkout for card payments and deployed webhooks for recording order and shipping information.
- Developed an email and Google OAuth 2.0 based authentication system using Clerk, improving customer management.

Full-stack Intern at [OneCommons](https://onecommons.com), San Francisco, CA (remote)

May - Jul 2022

JavaScript, Vue.js, Node.js, CSS, GraphQL, Jest, Cypress, Git

- Contributed to unfurl.cloud, a PaaS platform, simplifying software deployment across various cloud providers.
 - Managed Agile workflows using Zenhub and GitHub, ensuring efficient daily task completion and weekly sprint planning.
 - Optimized GraphQL queries by refactoring resolvers, reducing payload size by 50% and page load times by 30%.
 - Enhanced user experience by implementing cookies, developing UI components, and refining the state management system.
 - Created comprehensive integration tests using Cypress and Jest, ensuring robust UI functionality and deployment flow.
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Skills

Languages: TypeScript/JavaScript, Python, C/C++, Java, Rust, HTML, CSS, OCaml

Technologies: React, Next.js, Vue.js, Tailwind CSS, Node.js, Express.js, GraphQL, REST, Prisma, PostgreSQL, Firebase, Redis, Docker, Apache Spark, PyTorch, Git/GitHub, AWS, macOS, Linux

Projects

Autoscaling Key-Value Store | Cloud Computing group project | Python, Rust, Go, Docker | [source code](#) | *Dec 2023*

- Developed an autoscaling key-value store system utilizing machine learning and consistent hashing algorithm.
- Integrated failure prevention mechanisms to ensure high availability and reliability.
- Explored key-value store solutions, achieving a 200% increase in throughput by optimizing performance and efficiency.

Stock Market Forecasting | Deep Learning group project | Python, PyTorch | [source code](#) | *Dec 2023*

- Experimented models (TCN, DeepAR, transformer) for [stock market forecasting competition](#), achieving MAE of 5.616.

Parallel Label Propagation | C, Open MPI | [source code](#) | *Dec 2023*

- Implemented a parallel label propagation algorithm, achieving a 50% decrease in time as the number of processes is doubled.

Recommendation System | Data Mining Course project | Python, Apache Spark | [source code](#) | *Apr 2023*

- Developed a collaborative filtering recommendation system to predict the user and business ratings, achieving RMSE of 0.76.

Metro-Transit | Web application | TypeScript (Next.js), Chakra UI | [source code](#) | *Mar 2022*

- Displayed the real-time metro-transit schedule to avoid long waiting at the station.
- Integrated a third-party API to fetch real-time schedules, transforming the data payload into type-safe data with TypeScript.
- Designed a responsive, user-friendly interface compatible with both web and mobile platforms using Next.js and Chakra UI.

Minesweeper | Collaborative project | Web game | [source code](#) | *Feb - Mar 2022*

JavaScript/TypeScript (React), Firebase, TailwindCSS, Express, Jest, Cypress

- Implemented a cache system to store frequently accessed data like leaderboards, improving page load speeds.
- Optimized Firestore interactions, reducing unnecessary requests and lowering monthly costs by refactoring of request logic.
- Enhanced security by integrating Firebase Authentication, securing sessions with JWTs for reliable user data storage.