

Jiayuan (Jerry) Hong

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<https://jiayuan-hong.com/>

217-200-0555

EDUCATION

University of Illinois Urbana Champaign

M.S. in Computer Science

GPA: 4.0/4.0

Expected May 2025

University of Illinois Urbana Champaign

B.S. in Computer Science and Mathematics

GPA: 3.8/4.0

Graduated May 2023

SKILLS

- **Languages:** JavaScript/TypeScript, Java, Python, C/C++, Go, Matlab, Ocaml, Clojure
- **Tools:** Spring Boot, REST API, GCP, Docker, AWS, Kafka, Redis, MySQL, MongoDB, BigQuery
- **Web Development:** React/React Native, Node.js, Vue.js, Next.js, Express.js, TailwindCSS

PROFESSIONAL EXPERIENCE

CME Group Innovation Center

Software Engineer Intern, Architecture and Product Management

Champaign, IL

May 2023 - Aug 2023

- Designed a high-volatility trading algorithm that accurately detected spikes and trend breakers in the code up competition.
- Developed a configurable middleware using Kafka and Pub/Sub to seamlessly transfer messages between systems and standardize information sharing across platforms, help CME migrate their applications to Google Cloud.
- Used the factory design pattern to abstract the creation of property loaders and refactored the class to isolate individual property loaders that implement a common interface in the code, reducing LOC in Jira Ticket Source.

University of Illinois

Course Assistant, Computer Science Department

Urbana, IL

Jan 2023 - May 2023

- Designed homework assignments and used MySQL to write queries to check and evaluate students' answers.
- Conducted weekly office hours to assist students one-on-one and provide guidance to debug their code effectively.

Zhejiang Uniview Technologies

Software Engineer Intern, Java Backend Team

Xian, China

Jan 2021 - Mar 2021

- Implemented Uniview Cloud Service, handling 10,000+ IP video surveillance devices, ensuring 99.9% uptime, and achieving 30% faster system response with Eureka, Redis, and distributed systems.
- Boosted system reliability with automated asynchronous login for offline devices in poor networks, reducing downtime by 30% and increasing overall stability by 25%.
- Designed an optimized heartbeat packet in the application layer, reducing server-client communication latency by 30% and achieving a 99.9% uptime for the system, ensuring a stable and robust user experience.

PROJECTS EXPERIENCE

3D Website Portfolio

<https://jiayuan-hong.com>

May 2023 – Present

- Create a 3-dimensional personal website with Three.js in React and use beautiful canvas like computer and earth.
- Load and customize various 3D models and geometries with lights and cameras using React Three Fiber.
- Use Framer Motion to animate the website and ensure responsiveness across all devices, improve site's performance using Suspense and Preload. Make the code reusable and scalable using Higher Order Components (HOC).

Apartment Rental App

<https://github.com/Einsgates/ApartmentRental>

Sep 2022 – Dec 2022

- Optimized Node.js backend, achieving 25% faster API response time and processing 10,000+ daily property information requests via Zillow API for improved user experience and platform performance.
- Developed React.js frontend with optimized Google Map and Keyword Search, resulting in 30% faster response times, 20% higher user engagement, and 15% increased app downloads.
- Optimized user-interaction functions with MongoDB, storing 50,000+ property records.

WechAt: A Chatting and Selling Products App

<https://github.com/Einsgates/WechAt>

May 2022 – Oct 2022

- Developed a Full-stack platform and utilized Google Cloud for MySQL and Node.js to implement the backend functions, including advanced queries like Transactions and Procedures for complex functionalities.
- Implemented the frontend using Vue.js, including pages like login, account, product, post, and chat sessions.