Junkai Man
Full Stack Engineer

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EDUCATION

Brown University   Providence, RI
Master of Science in Computer Science; GPA: 3.8   08/2023 – 05/2025

Duke University / Duke Kunshan University   Durham, NC
Bachelor of Science in Data Science; GPA: 3.84; Graduated with Senior Honor   08/2019 – 05/2023
- Publications: ACM Multimedia 2022, Applied Intelligence 2023, ChinaVis 2022

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, TypeScript, HTML, CSS, C++, C#, Golang, SQL, NoSQL, PHP
Frameworks: React, Redux, Angular, Vue, Next.js, Express.js, Spring, Django, Flask, PyTorch, GraphQL
Tools: Kubernetes, MySQL, Spark, Flink, Node.js, Redis, MongoDB, Docker, ArgoCD, Git, Jest, Selenium

EXPERIENCE

Microsoft   04/2024 – 08/2024
Software Engineer Intern   On-site
- Developed core **React** components for Microsoft Forms Copilot, enabling grounding file reference, file sensitivity alerts, and integration with OneDrive to streamline the AI-assisted survey creation process.
- Implemented query caching in **Redux**, reducing loading time from 2000ms to near-instant for cached results.
- Designed and implemented a backend **LLM** workflow in **TypeScript** to suggest theme images from a resource library based on survey titles, achieving a 10% increase in user adoption through A/B testing.
- Resolved 20+ accessibility issues with improved keyboard experience. Ensured compliance with WCAG standards.

Brown University Library   09/2023 – 04/2024
Software Engineer Intern   Hybrid
- Revamped **Angular** components for Library Discovery System and integrated analytic tools for telemetry of user engagement. Optimized the website's indexing on search engines, resulting in a 20% increase in organic traffic.
- Led critical upgrade for a website from **PHP** v5 to v7, reducing security vulnerabilities by modernizing deprecated modules and rewriting **SQL** queries, thereby enhancing site performance and user security.

Microsoft   07/2022 – 10/2022
Support Engineer Intern   On-site
- Co-developed a Teams Bot in **C#** and **TypeScript**, streamlining workflow automation on IcM and cutting manual task allocation by 40%, earning recognition at Microsoft Hackathon 2022.
- Engineered a dashboard to provide real-time insights into employee skill levels, optimizing resource management and reducing decision-making time by 30%.

China Unicom   06/2021 – 08/2021
Software Engineer Intern   On-site
- Maintained the ETL data pipelines in **Java** which processes millions of users' behavior metrics daily. Improved data reliability by schema validation and feature engineering for the **recommender system**, which led to a 20% increase in user conversion rates and a 15% boost in product revenue.
- Optimized performance of **Flask** backend through multi-threading and caching techniques, significantly enhancing API throughput and reduced the user interaction response time **from 1200ms to 400ms**.

PROJECTS

Gallinula: All-in-one Campus Experience App   05/2020 – 05/2023
- Developed Gallinula.com, a campus-life application with 400+ daily active users. Utilized Mastodon and **MongoDB** for backend, and crafted a responsive front-end in **Next.js** and **Tailwind CSS**, ensuring an optimal user experience.
- Decoupled the monolithic architecture into **microservices**, enhancing system scalability and maintainability, and optimized the CI/CD process using **Kubernetes** and **ArgoCD**, reducing manual maintenance costs by 80% and increasing service uptime by 50%.
- Engaged nearly **50%** of Duke Kunshan University's student population as active users, storing over 18,000 posts and replies, indicating high platform relevance and user retention.