Junkai Man

Full Stack Engineer

**EDUCATION** 

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Brown University Providence, RI

Master of Science in Computer Science; GPA: 3.86 08/2023 – 05/2025

**Duke University / Duke Kunshan University** 

Bachelor of Science in Data Science; GPA: 3.84; Graduated with Senior Honor

• Publications: ACM Multimedia 2022, Applied Intelligence 2023, ChinaVis 2022

08/2019 – 05/2023

Durham, NC

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

- 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.
- 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.
- 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.
- 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**

## Insta-UI: LLM-based UI Code Generator (GitHub Repo: junkaiman/ui-generator)

09/2024 - Current

- Lead development of Insta-UI, a low-code platform that generates UI code snippets from user prompts and conversations, enabling rapid prototyping and development of web applications for UI/UX designers.
- Automated CI/CD pipeline using **GitHub Actions** and branching strategies to ensure code quality and deployment readiness, reducing manual intervention by 80%.
- Utilized **IndexedDB** and **Dexie.js** for local storage for efficient data management and offline access, ensuring inputs are saved and restored across sessions.

## 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%.
- 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.