Xuechun Hua

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GitHub: https://github.com/XuechunHHH

Education

University of Southern California | Los Angeles, CA January 2023 – Expected May 2025
Master of Science, Computer Science (GPA 4.0/4.0)
Relevant Coursework: Introduction to Programming Systems Design, Web Technologies, Introduction to Computer Networks, Analysis of Algorithms, Machine Learning, Introduction to Digital Image Processing

Nanjing University | Nanjing city, China September 2018 – June 2022
Bachelor's degree, Mathematics and Statistics
Relevant Coursework: Discrete mathematics, Database, Linear Algebra

Technical Skills

Languages: Java, TypeScript, PartiQL, JavaScript, Swift, Solidity, HTML, CSS, SQL, MATLAB
Frameworks: Angular, Vue.js, Node.js, Express, Flask, SwiftUI, Spring
Databases: DynamoDB, MySQL, Oracle, ClickHouse, Firebase, MongoDB

Internship Experience

Software Develop Engineer Intern, **PartiQL Team | Amazon | USA** 05/2024 – 8/2024

- Enhanced the PartiQL ***Language Server*** by adding two ***AWS*** runtime request handlers and integrating features like syntax highlighting and auto-completion, contributing to its integration in ***AWS Cloud Editor*** and publication on the LSP Implementations page (https://github.com/aws/language-servers).
- Released the ***PartiQL CLI*** and successfully published it on ***Homebrew***, enhancing accessibility and user engagement.
- Implemented the PartiQL grammar for ***Tree-sitter*** to generate a fallible parser, improving parsing accuracy and efficiency.

Code Auditor Intern, **WatchPug Team | Web3.0 Code Auditing Team | Remote** 06/2022 – 12/2022

- Developed and deployed a ***Web3.0*** code auditing application platform with an embedded automated award distribution system on ***Ethereum***, enhancing bounty program efficiency.
- Collaborated with a team to audit ***Solidity*** projects for top Web3.0 companies such as Solana, Gelato, Sherlock, and Sandclock, achieving the rank of ***#1*** Web3.0 Auditing Team for 2022. (https://code4rena.com/leaderboard?timeframe=2022)

DevOps Engineer Intern, **Uranus Research Co., Ltd | China** 01/2022 – 05/2022

- Designed and implemented an automated system for real-time stock market data retrieval, utilizing APIs to parse and decode ***UDP*** packets from exchange servers within 50ms latency and ***99.9%*** accuracy, ensuring timely and precise data reception.
- Set up and maintained ***Oracle*** and ***ClickHouse*** databases on a local server, ensuring data accessibility and integrity for stakeholders.
- Implemented and maintained a robust monitoring and alert system to promptly notify team members of system errors or anomalies, enhancing operational reliability.

Projects

Full-stack Searching Application: Events Around 03/2023 – 05/2023

- Independently developed a full-stack ***Web*** and ***iOS*** application for event searching and scheduling, integrating location-based functionalities and user-customized features.
- Built a robust backend using the ***Express*** framework, supporting numerous ***RESTful*** APIs and resolving ***CORS***-related issues to ensure smooth data exchange.
- Implemented a responsive front-end with ***AngularTS***, leveraging Web Storage to permanently cache user favorites.
- Integrated multiple ***APIs*** from platforms like Ticketmaster, Spotify, Google Maps, and social media to enrich user interactions by retrieving and processing JSON data from diverse sources.
- Developed an ***iOS*** version using ***SwiftUI*** and ***CocoaPods***, incorporating third-party libraries like Alamofire, Kingfisher, and Simple Toast to enhance data retrieval, image display, and UI design.

Cloud-Based Serverless Web Application: Embrace the World 05/2023 – 07/2023

- Led a team of three to develop a real-time networking application for social connectivity using ***React*** and ***Node.js***.
- Utilized ***MongoDB*** for data storage and ***Redis*** for caching, achieving low-latency data retrieval and accurate user profile storage.
- Managed real-time communication through ***Bull*** message queues and ***SocketIO***, ensuring data integrity during user interactions.
- Integrated ***Slack*** with the ***CI/CD*** pipeline via ***CircleCI*** and orchestrated infrastructure deployment using ***Terraform*** to minimize human error and streamline upgrades.
- Configured ***AWS*** resources, including internet gateways, load balancers, S3, and auto-scaling, to efficiently handle high volumes of user concurrent requests.