Yifan Pan

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Available for internship/co-op during Jan 2021 - Aug 2021

Education

Northeastern University Jan 2020 – May 2022 (Expected)
Candidate for a Master of Science in Computer Science, GPA 4.0/4.0 *Seattle, WA*
- Teaching Assistant for Discrete Structures

Southwestern University of Finance and Economics Sep 2013 – Jul 2017
Bachelor of Economics, GPA 89/100 *Chengdu, China*

Technical Skills

Languages	JavaScript, Rust, Go, C++, Java, Python, Haskell, SQL, HTML, CSS
Libraries	React, Redux, Redux-Saga, Apollo, GraphQL, Actix, MySQL, MongoDB, Redis, Express
OS/Tools	Ubuntu, CentOS, Nginx, Docker, Git, Jenkins, VS Code, Jira

Work Experience

Front-end Software Engineer May 2018 – Dec 2019
Betalpha Technology *Chengdu, China*
- Developed backtesting, factor attribution and portfolio optimization modules using Electron, React and Redux for an investment research software used by top asset management companies managing billions of funding.
- Introduced Redux-Saga to the team to handle increasing complexity of communication with server for computation tasks, reducing asynchronous bugs by 80%.
- Kept code duplication rate constantly below 5% by abstracting common features (e.g. access control and spreadsheet generation) into higher-order React components.
- Analyzed performance issue and optimized a major inefficiency caused by repeated generation of Redux data selectors, saving memory use by 10%.

Front-end Software Engineer Jul 2017 – May 2018
Everimaging Technology *Chengdu, China*
- Led a team of 3 developers to work on localization and optimization of the Fotor online design platform.
- Built single-page applications using React and React Router for submit and review system of design works, designer's portfolio page and printing order system, achieving 10k+ daily active users.
- Refactored help center from WordPress-based into Jamstack-based using Hugo, reducing loading time by 80%.

Projects

Connect Four Online Game Sep 2020
- Created a 3D online game supporting multiple users playing with an AI client, playing and chatting with friends via a room link, or playing with a stranger by random pairing.
- Developed a Rust server using Actix framework and deployed on Vultr cloud. Implemented algorithms for updating game status, room allocation and player data, allowing broadcasting real-time update to end players through WebSocket.
- Implemented the 3D interface using Three.js. Configured geometry, material and light to make it pretty.
- Realized an elegant asynchronous solution using Redux-Saga event channel for three-way interactions between React-based dashboard, HTML canvas and WebSocket server.

Memorizing App Oct 2020
- Created an app helping user combat the forgetting curve of memorizing words, poems, etc. by automatically scheduling reinforced reviews.
- Developed a GraphQL service in a Go server to handle all queries and mutations. Designing a normalized MySQL database for review scheduling and achieved minimum data storage. Utilized Redis to store session tokens.
- Implemented the front end following Google Material Design standard using React, Apollo and React Router.

Blog Content Management System Jan 2018 – May 2018
- Developed a blog system and deployed on Alibaba cloud using React, Redux and React Router. Realized features including throttled auto-saving, side-by-side live preview and delete recovery.
- Implemented back end using Node.js and MongoDB, designed RESTful APIs for blog post CRUD.