

Yifan Pan

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EDUCATION

Northeastern University <i>Candidate for a Master of Science in Computer Science, GPA 4.0/4.0</i> <ul style="list-style-type: none">Teaching Assistant for Discrete Structures	Jan. 2020 – May 2022 (Expected) Seattle, WA
Southwestern University of Finance and Economics <i>Bachelor of Economics, GPA 89/100</i>	Sep. 2013 – Jul. 2017 Chengdu, China

WORK EXPERIENCE

Front-end Software Engineer <i>Betalpha Technology</i> <ul style="list-style-type: none">Developed backtesting, factor attribution and portfolio optimization modules using <u>Electron</u>, <u>React</u> and <u>Redux</u> for an investment research software used by top asset management companies managing billions of funding.Introduced <u>Redux-Saga</u> 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 <u>Redux</u> data selectors, saving memory use by 10%.	May 2018 – Dec. 2019 Chengdu, China
Front-end Software Engineer <i>Everimaging Technology</i> <ul style="list-style-type: none">Led a team of 3 developers to work on localization and optimization of the Fotor online design platform.Built single-page applications using <u>React</u> and <u>React Router</u> 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 <u>Jamstack</u>-based using <u>Hugo</u>, reducing loading time by 80%.	Jul. 2017 – May 2018 Chengdu, China

PROJECTS

Connect Four Online Battle <ul style="list-style-type: none">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 <u>Rust</u> server using <u>Actix</u> framework and deployed on Vultr cloud. Implemented data structure for storing user session, game status, room allocation and player data, allowing broadcasting real-time update to end players through <u>WebSocket</u>.Implemented the 3D interface using <u>Three.js</u> and configured geometry, material and light to make it pretty.Realized an elegant asynchronous solution using <u>Redux-Saga</u> event channel for three-way interactions between React-based dashboard, HTML canvas and WebSocket server.	Sep. 2020
Memorizing App <ul style="list-style-type: none">Created an app helping student memorize English words by scheduling reinforced reviews automatically.Developed <u>GraphQL</u> service in a <u>Go</u> server. Designed a normalized <u>MySQL</u> database for review scheduling. Utilized <u>Redis</u> for session token storage.Implemented the front end following Google Material Design standard using <u>React</u> and <u>Apollo</u>.	Oct. 2020
Blog Content Management System <ul style="list-style-type: none">Developed a blog system and deployed on Alibaba cloud, supporting rendering Markdown articles with math formula using <u>React</u>, <u>Redux</u>, <u>React Router</u>.Implemented back end using <u>Node.js</u> and <u>MongoDB</u>, designed RESTful APIs for blog post CRUD. Realized features including auto-save while editing, side-by-side live preview and delete recovery.	Jan. 2018 – May 2018

TECHNICAL SKILLS

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