

# Yifan Pan

703-870-5984 | [pan.yifa@northeastern.edu](mailto:pan.yifa@northeastern.edu) | Seattle, WA  
[github.com/catnipan](https://github.com/catnipan) | [yifan.catnipan.com](https://yifan.catnipan.com) | [linkedin.com/in/yifanpan](https://linkedin.com/in/yifanpan)  
Available for internship/co-op during Jan 2021 - Aug 2021

## EDUCATION

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

## TECHNICAL SKILLS

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

## WORK EXPERIENCE

<b>Front-end Software Engineer</b> <i>Betalpha Technology</i> <ul style="list-style-type: none"><li>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.</li><li>Introduced <u>Redux-Saga</u> to the team to handle increasing complexity of communication with server for computation tasks, reducing asynchronous bugs by 80%.</li><li>Kept code duplication rate constantly below 5% by abstracting common features (e.g. access control and spreadsheet generation) into higher-order <u>React</u> components.</li><li>Analyzed performance issue and optimized a major inefficiency caused by repeated generation of <u>Redux</u> data selectors, saving memory use by 10%.</li></ul>	May 2018 – Dec 2019 Chengdu, China
<b>Front-end Software Engineer</b> <i>Everimaging Technology</i> <ul style="list-style-type: none"><li>Led a team of 3 developers to work on localization and optimization of the Fotor online design platform.</li><li>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.</li><li>Refactored help center from WordPress-based into <u>Jamstack</u>-based using <u>Hugo</u>, reducing loading time by 80%.</li></ul>	Jul 2017 – May 2018 Chengdu, China

## PROJECTS

<b>Connect Four Online Game</b> <ul style="list-style-type: none"><li>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.</li><li>Developed a <u>Rust</u> server using <u>Actix</u> 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 <u>WebSocket</u>.</li><li>Implemented the 3D interface using <u>Three.js</u>. Configured geometry, material and light to make it pretty.</li><li>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.</li></ul>	Sep 2020
<b>Memorizing App</b> <ul style="list-style-type: none"><li>Created an app helping user combat the forgetting curve of memorizing words, poems, etc. by automatically scheduling reinforced reviews.</li><li>Developed a <u>GraphQL</u> service in a <u>Go</u> server to handle all queries and mutations. Designing a normalized <u>MySQL</u> database for review scheduling and achieved minimum data storage. Utilized <u>Redis</u> to store session tokens.</li><li>Implemented the front end following Google Material Design standard using <u>React</u>, <u>Apollo</u> and <u>React Router</u>.</li></ul>	Oct 2020
<b>Blog Content Management System</b> <ul style="list-style-type: none"><li>Developed a blog system and deployed on Alibaba cloud using <u>React</u>, <u>Redux</u> and <u>React Router</u>. Realized features including throttled auto-saving, side-by-side live preview and delete recovery.</li><li>Implemented back end using <u>Node.js</u> and <u>MongoDB</u>, designed RESTful APIs for blog post CRUD.</li></ul>	Jan 2018 – May 2018