

# Joshua Tan

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## EDUCATION

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**Brown University**, *B.S. Computer Science, B.A. Economics, 4.0/4.0 GPA* Providence, RI | **Expected Graduation May 2023**

- CS coursework: Software Engineering, Computer Systems, Modern Web & Mobile Applications, Database Management Systems, Computer Vision, Discrete Structures and Probability, Deep Learning, Linear Algebra
- Student organizations: Full Stack at Brown, Brown Finance Club (Technology Chair), Socially Responsible Investment Fund

## EXPERIENCES

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**Government Technology Agency (Singapore)**, *Software Engineer Intern* Singapore | Summer 2021

- Developed features for a government grants web portal using React and Ruby on Rails, as part of an agile scrum team.
- Practiced Test-Driven Development, using test libraries like Enzyme and Mocha for the frontend and RSpec for the backend.
- Maintained and refactored legacy code to improve code reusability and patch security vulnerabilities.
- Conducted demonstrations to product owners during sprint reviews and assisted in hosting sprint retrospectives.

**Develop for Good**, *Backend Software Developer* Remote | Spring 2021

- Collaborated with a team of designers and developers to create a mobile application for the Environmental Defense Fund which allows them to communicate and interact with their environmental activists.
- Designed and programmed a RESTful API for the backend server using Node.js and a MongoDB database.
- Wrote detailed API documentation for frontend developers and future maintainers to reference.

**Theme International Trading**, *Software Engineer Intern* Singapore | Summer 2020

- Designed and developed internal software tools using the .NET framework for a quantitative trading firm.
- Programmed an application that interacts with external APIs to automate the OTC trade execution process.
- Developed an invoice management application that aggregates data from multiple sources for the firm's financial controllers.

**Full Stack at Brown**, *Software Developer* Providence, RI | Jan 2020 – Present

- Full-stack developer at a student organization that develops web and mobile applications for the Brown community.
- Worked on the full-stack development of the Brown Essentials mobile application and the 1<sup>st</sup>@Brown mobile application.
- Designed low-fidelity application mockups using Figma when there was no designer assigned.

## TECHNICAL PROJECTS

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**Circles** | React Native, Node.js, Google App Engine, Google Datastore

- Privacy-centric social media platform with features to promote physical interactions and quality connections.
- Users can make plans and share memories with their social circles with highly customizable privacy controls.
- Won the Wolfram Award at Brown University's annual Hackathon.

**Coordinator** | React.js, Spark Java, SQLite

- Web application that generates optimal meeting times for a group of people based on their availability calendar.
- Click-and-drag calendar interface makes it easy for users to indicate their availability. Time zone adjustments are automatic.
- Application can also split users into subgroups with similar meeting times using a variation of k-means clustering.
- Designed to be accessible for visually impaired individuals and keyboard only users.

**Secret Shop** | React.js, Bootstrap, Node.js, MongoDB

- Web marketplace to buy, trade or sell used video games.
- Includes a chat application for users to negotiate on price and a user profile to display games available for trading.

**Brown Essentials** | React Native, Node.js

- Mobile application that provides students with real-time dining and laundry information (e.g. machine availability)
- Includes an interactive map that highlights important locations for students.

**First @ Brown** | React Native, Node.js, PostgreSQL

- Mobile application that allows freshmen to connect with others based on their responses to questions.
- Includes a real-time chat implemented with web sockets and signing in with a google school email.

**Food Capture** | React Native, Node.js, MongoDB

- Mobile platform to reduce food waste that notifies users of any events with free leftover food.
- Event organizers can create posts with pictures and broadcast them to users within a certain school campus or office building.

## SKILLS

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**Programming languages:** JavaScript, TypeScript, Python, Java, Scala, C, C#, ReasonML

**Full stack development:** React Native, React.js, Node.js, Ruby on Rails, MongoDB, SQL, Firebase, HTML, CSS

**Others:** Git, LaTeX, Microsoft Office, CPR trained

**Languages:** English (Native), Chinese