

# Rui Tang

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## EDUCATION

**Bachelor of Science in Computer Science Major**

*University of Manitoba*

January 2015 - February 2019

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## TECHNICAL SKILLS

Programming Languages: **JavaScript, Java, PHP, SQL, HTML/CSS, C/C++, C#, Python, Ruby**

Libraries and Frameworks: **React, Node.js, Express.js, Redux, jQuery, Jest**

Development Environment and Tools: **Linux, Git, MySQL, MongoDB, WordPress, Gatsby.js**

Other related knowledge: **Ajax, Agile Methodologies, JSON, REST, AWS, Object**

**Oriented Programming, Responsive Web Design, Nginx**

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## INDUSTRIAL EXPERIENCE

### Contract Web Developer

**360 E-Media Inc.**

September 2020 – March 2021

- Built a mobile web app that operated as an online forum which features news sharing, job listing and local trading; **Agile methodologies** were used throughout the development.
- Led the early phase project planning; composed the vision statement, identified user stories with other co-developers.
- Designed the architecture of the app; broke the frontend down to minor components that were parallelable for multiple developers to work on; designed a **RESTful** backend API.
- Implemented the frontend components with **React** and backend API with **Express.js** and **MySQL**.
- Utilized **Git** as the version control tool and **Slack** as project tracking tool for the development team.
- Organized regular meetings among developers where separate work outcomes joined together and new development plans were discussed according to the actual project status.
- Executed unit tests using **Jest** for **React** components rendering and utility functions in every iteration.
- Scheduled meetings with customer at the end of each iteration to present the app's latest version and collect new customer comments and requirements.
- Deployed the app on **AWS EC2**.

### Contract Web Developer

**Aroma Bistro**

January 2020 – March 2020

- Built Aroma Bistro's official website to help promoting their brand awareness.
- Designed the user interface and established the website frontend webpages using **WordPress** including a series of plugins and custom **HTML/CSS** code snippets.
- Communicated with the restaurant owner throughout the development to gather demands and feedback.
- Launched the website and online orders increased sharply after the first week.

## Contract Software Developer

**Honu Express Ltd.**

**August 2019 – December 2019**

- Developed a website that included an online prize draw game to reward customers and an administration system that could be used by business owner to manage users and prizes information.
- Implemented the website using **PHP**, **JavaScript** and **HTML/CSS**.
- Utilized **jQuery** to manipulate HTML DOM for user interaction and game animation.
- Used **Ajax** to update page content dynamically to create better end user experience.
- Expanded the existing **MySQL** database of Honu's E-business platform for new features.
- Executed PHP unit tests with PHPUnit and **JavaScript** unit tests with **Jest**.
- Released the app and the number of registered users grew by 18% for the first month and 33% by the end of my contract.

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## PROJECTS

### Agile Project Planner

**Personal Side Project**

**June 2019 – Present**

- Created a light-weight project planning web app that enabled users to plan their projects following agile methodologies and track the development progress.
- Devised a relational database with **SQL**; Designed the app UI using Adobe Illustrator.
- Implemented the app frontend views using **React**; Built the server-side application with **Express.js**.
- Launched the app on a subdomain of personal website and attracted positive response after being trialed among a small amount of computer science undergraduates.

### Improving Blockchain Scalability with Parallel Mining

**Individual Research Project**

**August 2018 – December 2018**

*Computational Financial Derivatives & Cloud Computing Lab (University of Manitoba)*

- Reproduced the Bitcoin-style block data structure following Bitcoin whitepaper and designed a novel block data structure employing the database partitioning technique of data-sharding.
- Simulated mining competition locally with the use of multiple threads.
- Implemented both the classic blockchain system and the newly designed dynamic parallel-mining blockchain system using **Java**.
- Benchmarked the performance of these two systems and the parallel-mining strategy provided a 20% to 186% improvement under different workloads.
- Presented the result to supervisor and lab colleagues and this project was evaluated as excellent.

### Self-Assessment Quiz Maker

**Software Engineering Project**

**April 2018 – August 2018**

- Built a native mobile app for Android using **Java** that allows users to evaluate their learning by generating and answering quizzes consist of four different types of questions.
- Spearheaded design and implementation of the database using **SQL**.
- Composed **SOLID** principles of **OOP** into the development and used **Git** for version control.
- Executed unit and integration tests from user approaches with **Junit** for each phase of development.
- Facilitated presentation for a computer science professor and a medium size group of students and received positive feedback.