Brian Chang

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Skills

Languages:	React, HTML/CSS, JavaScript, Node.js, Python, C++
Tools:	React-Router, React-Redux, Jest, Postman, Sass, Git, MaterialUI, Ant Design, MongoDB

Projects

B2B Data Dashboard/Media Hub

- Developed a cutting-edge full-stack MERN (MongoDB, Express.js, React, Node.js) B2B application.
- Commissioned for multiple multimillion-dollar corporations, rapidly acquiring proficiency in Typescript to meet project demands.
- Embraced a mobile-first perspective, making numerous components responsive to various devices.
- Utilized Redux and followed Atomic Design for efficient state management and component organization.
- Employed React Router for seamless page management and private route handling.
- Designed RESTful APIs, all protected with JWT Tokens for utmost security, tested thoroughly using Postman.
- Translated client Figma designs into pixel-perfect, visually stunning front-end visuals.
- Ensured an exceptional user experience through rigorous error handling and usage feedback.

Venti

- Collaboratively designed an automated temperature management system using smart vents and vent fin controls to non-intrusively enhance home air flow and comfort.
- Used two-way LoRa communication (Arduino, C++) to exchange data packets between the centralized thermostat hub and individual smart vents.
- Programmed vent software to contain sleep functionality to assist in battery life longevity.
- Designed and implemented user interfaces with traditional HTML and CSS for configuring temperature goals and monitoring live humidity, pressure, and air quality statistics.

Connect2Earth

- My inaugural web development project at Pixelbot - Collaborated with the World Wildlife Fund (WWF) to create an eco-friendly React-based social media hub, promoting global environmental awareness.
- Employed sophisticated IP detection mechanisms to dynamically customize links and site language, catering to the diverse country origins of users.
- Integrated social media functionality seamlessly into the website using APIs from top platforms like Facebook and Twitter, amplifying user engagement and the dissemination of WWF's critical environmental message.

Experience

Dozr [Developer | May - September 2021 | Kitchener, Canada]

- Maintained a high-traffic React-Redux site with consistent bug fixes and feature development, leading to fewer reported issues and increased user satisfaction.
- Spearheaded an overhaul of the backend and email infrastructure, enhancing user communication.
- Took ownership of re-implementing user purchase tracking by creating an API-connected customer order page.
- Implemented user analytics through tools like Google Analytics and Bing Ad Conversion, providing granular insights into user interactions and guiding improvements in customer engagement and website functionality.

BenQ [Developer | May - August 2019 & January - April 2020 | Taipei, Taiwan]

- Increased Quality Assurance department velocity by developing a Chrome extension to streamline error reports from Mantis bug tracking, resulting in faster issue resolution.
- Streamlined user feedback handling for the marketing team by enhancing Mention, a social media marketing tool, to retrieve, analyze, and categorize user feedback on BenQ products, improving product insights.
- Improved marketing campaign analysis by automating user data transfer to integrate with Salesforce data.
- Prototyped stream broadcasting systems using experimental technologies (WebRTC, Socket.io, etc.) to test the feasibility of content broadcasting products for its current line of televisions.
- Implemented China-compliant web analytics tools, enabling successful user tracking of consumers located in China.

Newtopia [Developer | September - December 2018 | Toronto, Canada]

- Achieved improved error handling and user engagement by designing, creating, and implementing a Redux-based log.
- Increased efficiency and compatibility of the mobile app's endpoint by refactoring it and adding JSDoc documentation.
- Enhanced code coverage from 80% to 90% of the entire code base by writing unit tests using Jest.
- Routinely fixed critical bugs, including forking third-party open source dependencies and editing/contributing to their code.

Education

University of Waterloo | Mechatronics Honours | Bachelors of Engineering

Relevant Courses:

SYDE 522: Foundations of Artificial Intelligience	SYDE 548: User Centered Design Methods
SYDE 543: Cognitive Ergonomics	ECE 484: Digital Control Applications
MTE 262: Microprocessors and Digital Logic	MTE 140: Data Structures and Algorithms
MTE 325: Microprocessor Systems and Interfacing for Mechatronics Engineering	GENE 121: Digital Computation