Brian Chang

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Skills

Languages:
React, HTML/CSS, JavaScript, Node.js, Python, C++, Assembly, PLC

Tools:
React-Router, React-Redux, Puppeteer, Jest, Postman, Sass, Git, MaterialUI, Ant Design, MongoDB

Projects

Job Data Web Scraper

- Led a web automation project for a multi-million dollar real estate firm to gather job postings across Greater Vancouver.

- Limited by available APIs, developed a custom scraping scripts to extract and categorize postings by industry, salary, and remote options, enhancing decision-making.

- Optimized scraping algorithms by analyzing job board data retrieval methods, reducing runtime from 1 hour to 35 minutes by eliminating unnecessary page navigations.

- Implemented a modular code structure to facilitate easy expansion for future use cases, ensuring scalability for different locations or job criteria with minimal development effort.

- Consistently coordinated with project stakeholders, incorporating continuous improvements to refine project requirements and enhance overall effectiveness for organizational objectives.

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.

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 Intelligence	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

Meta Marketing Analytics Professional Certificate Course

Courses:

Introduction to Data Analytics	Data Analysis with Spreadsheets and SQL
Data Analytics Methods for Marketing	Marketing Analytics Foundation
Marketing Analytics with Meta	Python Data Analytics
Statistics for Marketing	