Brian Chang

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Skills

Frontend:

React   React-Router

React-Redux   Next.js

TypeScript   MaterialUI

Ant Design   Tailwind

Backend:

Node.js   Express.js

MongoDB

Languages:

JavaScript   Python

HTML/CSS   C++   Assembly

Dev Tools:

Git   Puppeteer   Jest

Postman

Projects

Real Estate Report Extraction

- Commissioned to automate the data extraction process from real estate reports, converting hours long manual operations into an instant task within 25 hours of development time
- Using Node.js, meticulously extracted data from PDFs using pixel positioning and referenced text data, leading to a reliable aggregation of real estate data
- Following data extraction, refined and standardized the data format for user-friendly interpretation, converting into a universally accessible CSV format
- Collaborated closely with contractors to innovate unique solutions for handling scenarios involving missing and outdated data
- Designed with scalability and versatility in mind, allowing future avenues for data aggregation of multiple real estate reports across different markets

Jobs 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 custom scraping scripts to extract and categorize postings by industry, salary, and remote options
- Optimized scraping algorithms by analyzing job board data retrieval methods, reducing runtime by 50% from 1.5 hours to 45 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
- Coordinated with project stakeholders, incorporating continuous improvements to refine project requirements and enhance overall effectiveness for organizational objectives

Data Dashboard/Media Hub

- Solely developed a full-stack MERN (MongoDB, Express.js, React, Node.js) B2B application.
- Embraced a mobile-first perspective, ensuring visual responsiveness to all devices.
- Utilized Redux and followed Atomic Design for efficient state management and component/file organization
- Employed React Router for seamless page management and private route handling
- Designed RESTful APIs 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.

Experience

Freelance Developer [December 2023 - Present | ⦿ Remote]

- Specialized in freelance development projects focusing on data extraction, compilation, visualization, and web scraping solutions.
- Collaborated with clients to understand project requirements and deliver tailored solutions within agreed timelines, leveraging effective communication and project management skills.
- Successfully automated the data extraction process from real estate reports and the manual recording of job postings data, effectively reducing manual workload and improving efficiency.
- Implemented innovative solutions for handling missing and outdated data, demonstrating problem-solving skills and adaptability.
- Worked closely with project stakeholders to refine requirements and ensure alignment with organizational objectives.

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

- Solely accomplished overhaul of the Node.js backend and EJS email infrastructure, connecting central backend and email generation microservices. Resulting in consolidation of follow-up emails for purchases across all Front-end platforms, accelerated completion to under 1 month for shareholder presentation.
- Took ownership of re-implementing user purchase tracking by creating backend connected order summary pages, accomplishing a production ready Front-End within 2 weeks.
- Implemented user analytics through tools such as 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 velocity by developing a Chrome extension to optimize error reporting from Mantis bug tracking. Included features such as screenshot integration and automated error categorization, the solution achieved a 10% reduction in daily time spent per employee, equivalent to saving 48 minutes per day.
- 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. Completed the proof of concept within 1 month for presentation to multiple Product Team Leads

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

- Achieved improved error handling and user engagement by designing, creating, and implementing a Redux-based log for developer observation.
- Increased efficiency and compatibility of the mobile app's endpoint by refactoring it and adding JSDoc documentation to all code written
- Enhanced code coverage from 80% to 90% of the entire code base by writing nearly 100 unit tests using Jest.
- Implemented comprehensive accessibility enhancements across 20 web pages to ensure WCAG compliance and optimal user navigation.
- Conducted meticulous testing with NVDA and JAWS screen readers, tracked and managed live issues in an Excel sheet for team resolution, and efficiently completed the project, including contractor feedback, within 3 weeks.
- 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

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	