

Brandon Walsh

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EXPERIENCE

Software Engineer

November 2021 – March 2024

Capital One

New York, NY

- Built and updated TypeScript React components to enhance user experience and display new partner deals in the Capital One Shopping product.
- Updated TypeScript Node.js API endpoints to integrate new partner data and support expanded functionality.
- Implemented A/B tests on both the frontend and backend to optimize feature performance and user engagement.
- Facilitated integrations with new partners, expanding the selection of deals available to users and directly increasing platform revenue through enhanced user engagement.
- Developed custom scripts for Capital One Shopping's Chrome extension, enabling compatibility with hundreds of retailers and saving users over \$300K in discounts.
- Enhanced internal tooling by improving the platform's Chrome extension and custom JavaScript engines, leveraging Cheerio.js and Puppeteer.
- Developed and maintained Extract-Transform-Load (ETL) pipeline to process and standardize partner data from CSV files and JSON APIs, integrating it into the team's canonical database.

Full Stack Developer

August 2017 – October 2021

Moonfarmer

Kingston, NY

- Onboarded and mentored new hires, led daily standups, provided technical direction, and conducted code reviews to improve team efficiency and collaboration.
- Built RESTful APIs using Typescript with Node & Express, and Ruby on Rails.
- Optimized Python data aggregation scripts and provided frontend updates for Johns Hopkins University (JHU) Coronavirus Research Center, enhancing data accuracy and accessibility for tens of thousands of daily users at the height of the pandemic.
- Oversaw code change deploys to cloud based services, with Docker, Kubernetes, & Google Cloud Platform (GCP).
- Created component-based frontend applications with React JS and Next.js, utilizing Redux for state management, and documenting components with Storybook.
- Designed and documented system features with Gherkin and OpenAPI specification (via Swagger).
- Built custom admin dashboards and content management systems (CMSes) with Ruby on Rails and KeystoneJS.
- Wrote tests for Ruby on Rails projects using RSpec.
- Reviewed and provided feedback on PRs to improve code quality and maintainability.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, Ruby, C++, SQL (Postgres), PHP, HTML/CSS, SCSS

Frameworks: React, Node.js, Express, Next.js, WordPress, Rails, Sinatra, Flask

Libraries & Technologies: Redux, jQuery, Lodash, pandas, NumPy, Puppeteer, Cheerio.js, Git, Docker, Google Cloud Platform, Kubernetes, Emscripten, GraphQL, REST API development, Jenkins, GitHub Actions

PROJECTS

Polished Map Tilemap Editor | *React, Redux, C++, Wasm, Emscripten*

February 2024 – Present

- Developed a web-based tilemap editor by porting a native C++ application into WebAssembly using Emscripten and integrating it with a React frontend.
- Refactored FLTK-based GUI with a JavaScript bridge for browser rendering & input handling.
- Enhanced usability by designing a custom File Explorer and tabbed interface, improving navigation and workflow efficiency for users working with multiple assets.

Twitch & Discord Queue Bot | *TypeScript, Node, Express, React, GCP, Postgres*

Dec. 2022 – Feb. 2023

- Developed and deployed Twitch and Discord bots that managed real-time player queues for Pokémon Scarlet & Violet raids, handling hundreds of concurrent users.
- Designed and implemented a Node.js backend with a PostgreSQL database to track player queues and automate invite distribution.

- Hosted and maintained separate GCP instances for Twitch and Discord bot services, ensuring high availability and real-time responsiveness.
- Integrated Twitch Chat commands and Discord bot interactions to allow players to join queues dynamically and receive automated direct messages with game codes.
- Extended Twitch bot functionality to support subscriber-exclusive interactions, enabling users to redeem channel points for on-stream effects, enhancing viewer engagement.
- Optimized queue handling logic to ensure fair player rotation and minimal downtime, improving user experience and engagement.

EDUCATION

SUNY New Paltz

Bachelor of Science in Computer Science

New Paltz, NY

August 2013 – May 2017

VOLUNTEER EXPERIENCE

Robotics Mentor

Salesian High School

August 2023 – Present

New Rochelle, NY

- Mentor high school students in robot design, coding, and engineering principles to prepare for FIRST Tech Challenge competitions.
- Manage team budget and fundraising efforts.
- Guide students in identifying & pursuing outreach opportunities to promote STEM engagement in the community.
- Foster collaboration and problem-solving skills within a student team.

ADDITIONAL WORK EXPERIENCE

WordPress Developer (Freelance)

SUNY New Paltz Library

February 2018 - September 2018

New Paltz, NY

- Collaborated with UX designer to develop an ADA-compliant WordPress website optimized for visually-impaired users and which was maintainable without updating source code.

Junior Developer

Evolving Media Network

January 2016 - June 2017

Kingston, NY

- Developed responsive React frontends based on UX wireframes, optimizing accessibility and performance.
- Built internal automation tooling using Python and Ruby.
- Wrote comprehensive testing and documentation for Rails applications.

KDA Web Technologies

Senior Assistant Developer

August 2014 - August 2016

New Paltz, NY

- Collaborated closely with designers to develop custom WordPress themes, delivering tailored aesthetic and functional experiences that aligned precisely with client branding and user requirements.
- Engineered native applications for clients by utilizing PhoneGap, providing cross-platform mobile solutions.
- Integrated payment and social medias plugins into websites, streamlining transaction processes and social interactions.