

WALKER BROADBENT

Ann Arbor, MI

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Education

University of Michigan

Sep. 2021 – May 2025

Bachelor of Science in Computer Science

Ann Arbor, MI

Relevant Coursework

- Advanced SQL and Databases
- Data Structures and Algorithms
- Database Management Systems
- Intro to Artificial Intelligence
- Machine Learning Research
- Web Systems

Projects

YouTube Study Material Generator | *Next.js, Flask, OpenAI API, YouTube Transcript API* **September 2024**

- Developed frontend in Next.js, delivering a seamless user interface for generating AI-powered flashcards and quizzes from YouTube videos.
- Integrated YouTube's transcript API and OpenAI's API to automatically create study materials by extracting video transcripts.
- Collaborating on backend improvements in Flask, working to implement a flexible API key system that supports both OpenAI and open-source models based on user hardware.
- Enhanced user experience by delivering flashcards and quizzes directly in app, enabling quick and interactive study sessions.

Recipe Social Media App | *Next.js, JavaScript, Postgres* **June 2024**

- Designed and built a full-stack social media application to help users reduce food waste by managing pantry items and discovering recipes based on available ingredients.
- Implemented user authentication with Auth0 and controlled data using Vercel's Postgres DB, enabling secure, scalable CRUD operations for pantry items and custom ingredients.
- Developed entire front and server-side logic in Next.js, eliminating need for traditional backend to provide fast, serverless performance.
- Introduced social media features like following users and liking recipes to generate community engagement and promote recipe discovery
- Deployed app on Vercel, ensuring smooth, scalable hosting and seamless user interaction across devices

Assignment Spreadsheet Extension | *Next.js, Chrome Storage API* **October 2024**

- Created a Google Chrome extension to help users organize and track upcoming assignments, replacing traditional student spreadsheet tracking methods.
- Utilized Chrome's storage API to store and retrieve assignment data locally, allowing for offline use and fast access.
- Designed a user-friendly interface for adding, editing, and marking tasks as completed, making assignment management more intuitive and accessible within browser.
- Ensured smooth interaction with browser environment, providing a lightweight tool for productivity without requiring external servers or databases

Technical Skills

Languages: JavaScript, Python, C++, SQL, HTML/CSS

Developer Tools: VS Code, Git, Chrome Developer Tools, Postman, Vercel

Technologies/Frameworks: GitHub, Next.js, React, Flask, Auth0, Sanity.io

Leadership Experience

YENIKA Fashion Editorial

Spring 2024 – Present

Web Development Director

University of Michigan

- Led development of a multi-team editorial website using Next.js and Sanity.io, coordinating efforts between 18 designers, writers, and developers.
- Managed a team of 6 to create a user-friendly platform, ensuring both seamless content publishing and consumption.
- Spearheaded technical decisions for frontend architecture, improving website responsiveness and promoting scalability.
- Hosted group and one-on-one workshops and mentoring to foster professional and technical growth of team members.