

Brandon Hach

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EDUCATION

The University of North Carolina at Charlotte
BS in Computer Science, Software Engineering Concentration

Charlotte, NC
August 2021 - May 2024

SKILLS

Programming Languages: Python, Javascript, Typescript, Java, HTML, CSS

Frameworks: React.js, Flask, Next.js, Express.js, Tailwind

DBMS: PostgreSQL, MongoDB, MySQL

Others: Postman, Git, Git Bash, Docker, Notion, DataGrip, VScode, Figma, VirtualBox

PROJECTS

[Collaborative Whiteboard WebApp](#) (React.js, Flask, PostgreSQL, Python, JavaScript, Tailwind, DaisyUI)

- Led a team of five in the development of a collaborative whiteboard web application that supports real-time sketching in an optionally password-locked room session with an asynchronous chat mechanic.
- Developed custom API server using Flask with user authentication and authorization mechanism (encrypted with bcrypt), and RESTful services consumed by React.js for a dynamic front-end experience. And utilized socket.io to achieve real-time communication for the chat and the interactive whiteboard in a room session.
- Managed project workflows by assigning user stories, hosting weekly Agile sprint meetings, and making releases for each project milestone on schedule. And completely oversaw front-end development using DaisyUI and Tailwind, crafting a sleek, minimalist bento-inspired design layout.

[Personal Portfolio Website](#) (Next.js, TypeScript, Tailwind, DaisyUI, Framer Motion)

- Leveraged Next.js and UI component structure with DaisyUI to build a portfolio website showcasing projects and personal interests in a clean and professional aesthetic. The layout style is inspired by [Bento.me](#).
- Next.js framework supports production optimization and server-side rendering, achieving faster page load time and responsive UI by only setting components to client or server use.
- Deployed into production on Vercel, ensuring optimal performance and accessibility for all users. Benefited from Vercel's straightforward rapid hosting deployment through its integrated support with the Next.js framework.

[ForTheBoard Forum](#) (Flask, Python, PostgreSQL, Bootstrap)

- Collaborated with a team of six to design and develop a forum website using Flask and Jinja built-in server-side templating engine with HTML and Bootstrap via CDN link.
- Daily agile sprint standups, sprint planning, and retrospectives with my team to promote cohesion and collaboration. Deliver business requirements quickly and effectively using Trello and Sprint documents for user stories.
- Upheld best practices in version control to consistently conduct pull requests and adhere to git etiquette to ensure no conflict arises and promote branch applications during development using Git-Bash as the CLI, GitHub for Git Version Control, and Discord for team communication and scheduling. This approach streamlined code reviews, reduced merge conflicts, and fostered smooth team collaboration.

[Luxury Cheese Marketplace](#) (Express.js, JavaScript, Tailwind, MongoDB)

- Built a luxury cheese e-commerce platform using Express.js and its included templating engine with basic user authentication (hashed with bcrypt), persistent data storage with MongoDB, and tailwind for styling.
- Organize project structure to use Model View Controller architectural design commonly used to structure web applications. The controller module contains business logic and services, the routes are separated from main in a modularized manner to ensure scalability, the model serves as an interface to the database to perform CRUD operations on resources, and the view contains the HTML or EJS templating engine provided by Express.
- Utilize middleware such as Multer for file uploads, Morgan for logging requests & errors, and customized middleware for user authentication, and input form validation & sanitization for security to protect against CSRF & SQL injection vulnerability using express-validator packages.

STUDENT ORGANIZATION

Association for Computing Machinery (ACM)

Club Member

September 2023 - May 2024

- Weekly meetings where the club members socialize, practice, and learn in the field of software engineering.