

# Brandon Hach

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## EDUCATION

**The University of North Carolina at Charlotte**

*BS in Computer Science, Software Engineering Concentration, GPA 3.54*

**Charlotte, NC**

*August 2021 - May 2024*

## SKILLS

**Programming Languages:** TypeScript, Python, JavaScript, Java, HTML, CSS

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

**DBMS:** PostgreSQL, Prisma, MongoDB, MySQL

**Others:** Agile Methodology, Postman, Git, Docker, Notion, DataGrip, Figma, VirtualBox, Ubuntu

## PROJECTS

**Collaborative Whiteboard WebApp (React.js, Flask, PostgreSQL, Python, JavaScript, Tailwind, DaisyUI)**

- Oversaw front-end development using React.js, DaisyUI, and Tailwind, crafting a sleek, minimalist bento-inspired design layout
- Managed project workflows by leading the team, assigning user stories, hosting weekly Agile sprint meetings, and making releases for each project milestone on schedule
- Developed API server using Flask with user authentication and authorization (encrypted with bcrypt), and RESTful services consumed by React.js for a dynamic front-end experience
- Helped implement socket.io for communication between the client and server. Implemented Konva.js for building the whiteboard and tools for the user in React.js

**Repguard (Next.js, TypeScript, Tailwind, Docker)**

- Led a 3-4 week agile sprints where releases were made after all user stories assignments were completed.
- Wrote docker-compose, used for containerizing & encapsulating application code, dependencies, and runtime environments. Led to a significant reduction in environmental-related issues and streamlined seamless integration for local development
- Implemented secured authentication flows with NextAuth, including OAuth integration with providers like Google & Discord, and Magic Link using a resend library with a custom domain
- Utilized PostgreSQL to store persistent data using Prisma and query for complex store/retrieval using multiple clauses written with TypeScript and functions provided by Prisma's type-safe API

**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
- Deployed and took advantage of Vercel's straightforward rapid hosting deployment through its integrated support with the Next.js framework, ensuring optimal performance and accessibility for all users

**Luxury Cheese Marketplace (Express.js, JavaScript, Tailwind, MongoDB)**

- Implemented Model-View-Controller (MVC) architecture featuring modularized routing, controller-based business logic, models for CRUD-based operations, and Express's EJS templating engine
- Utilize middleware such as Multer for file uploads, Morgan for logging requests & errors, 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*

- Participated in weekly meetings with club members by socializing, practicing, and learning about the software engineering industries from associates
- Worked with other members to tackle Leetcode questions by building algorithms and using data structures
- Learned and reinforced my knowledge of Python