Charles Wilson

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Education

University of Wisconsin - Whitewater Sep 2024 – Dec 2025
M.S. Computer Science *Whitewater, WI*
- Courses: Machine Learning, Advanced Algorithm Design and Analysis, Advanced Databases

Hamline University / Macalester College Jan 2021 – Aug 2024
B.S. Computer Science — B.S. Data Science *St. Paul, MN*
- Magna Cum Laude — **GPA: 3.85**
- Courses: Software Engineering, Deep Learning, Operating Systems, Computer Architecture, Object-Oriented Programming, Algorithms and Data Structures, Database Management, Web Design, Data Mining

Work Experience

Ameriprise Financial May 2023 – Aug 2023
Software Engineer Intern *Minneapolis, MN*
- Created a front-end application for a 2-year project with React.JS and connected it to Amazon Web Services (AWS)
- Collaborated with cross-functional teams to identify and implement additional features, resulting in a 20% increase in overall functionality of the application.
- Presented final project to 50+ software engineers, executives, and the CIO

Hamline University Sep 2023 – Dec 2023
Programming Tutor *St. Paul, MN*
- Provided personalized programming instruction to students of varying skill levels, improving their understanding of coding concepts and achieving a 100% satisfaction rate in student feedback.
- Developed and delivered customized lesson plans on topics such as algorithms and debugging, fostering problem-solving skills and practical coding proficiency.

Projects

Movie Swiper | *Website* | *Source Code* **MERN** | **APIs** | **Tailwind**
- Built a full-stack movie-matching web app using the MERN stack and Tailwind CSS, integrating the TMDB API to fetch movie data. Users can sign in, join a session, and swipe on movies with real-time interactions.
- Implemented a matchmaking system where users in the same session get notified when they both like the same movie, enhancing the interactive experience with dynamic updates and session-based matching.

Pathfinding Visualizer | *Website* | *Source Code* **ReactJS** | **Bootstrap** | **Algorithms**
- Built an interactive pathfinding visualizer with React.js, implementing Dijkstra's and A* algorithms for real-time shortest-path calculations
- Designed dynamic grid features with user-friendly controls, enabling obstacle placement and visual animations to enhance algorithm comprehension

MacQuiz | *Website* | *Source Code* **VueJS** | **Firebase** | **Agile**
- Led a team of three in developing a web-based quiz game using Vue.js and Firebase, implementing a timer-based scoring system and dynamic difficulty levels

Leadership

Football Captain (Hamline University) Aug 2022 – Nov 2023
- Demonstrated leadership by organizing and leading offseason workouts and facilitating a team book club to foster collaboration and growth
- Earned First-Team Academic All-American honors by the CSC (2023), First-Team MIAC All-Conference recognition (2022, 2023), and was a Campbell Trophy Semi-Finalist (2023)

Technical Skills

Languages: Python, Java, SQL, JavaScript, C, R, HTML5, CSS

Developer Tools: AWS, Power BI, Git, Firebase, MongoDB

Libraries/Frameworks: ReactJS, VueJS, NodeJS, TailwindCSS, Express, TensorFlow, Keras