

Charles A. Nortrup

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EDUCATION

Milwaukee School of Engineering

Fields of Study: B.S. Computer Science and Early Entry M.S. Machine Learning

Expected Graduation: May 2027 (B.S.) and May 2028 (M.S.)

GPA: 3.6

Relevant Course Work: AI Tools, Cloud Design and patterns, Data Science, Data Structures, Tools and processes, Networking and Security, Algorithms and advanced data structures, Object Oriented C++

TECHNICAL AND INTERPERSONAL SKILLS

Programming Languages: Python, Java, JavaScript, R, HTML, SQL, C++

Tools & Platforms: AWS, Jupyter, IntelliJ, Conda, Cursor

Soft Skills: Team Leadership, Public Speaking, Conflict Resolution, Cross-Functional Collaboration, Lifelong Learner

TECHNICAL PROJECTS

AI Research – Reinforcement Learning for Hearts (Oct 2023 – Apr 2024)

- Collaborated with a team to teach an AI to play the card game Hearts using reinforcement learning.
- Trained AI by assigning reward points to influence decision-making behavior.
- Helped implement game logic and translate game rules into code.
- Ran hundreds of thousands of games, which resulted in the agent slowly learning how to play.

AI Research – Alzheimer's Detection from MRI Scans (Oct 2024 – Apr 2025)

- Worked on a model to detect Alzheimer's disease using MRI data.
- Learned and implemented Python libraries such as pyradiomics and Antspy.
- Developed a Jupyter Notebook for registering brain scans to a standard atlas.

Wordle Game with UI & Backend (Feb 2025 – Apr 2025)

- Built a Wordle game in a team using agile development practices.
- Developed a stats tracking class and dynamic dictionary management system.
- Enabled persistent game history tracking for users.
- Created an app ready for launch.

Web Scraping Script (August 2025 – Sept 2025).

- Designed a script for intelligent web scraping
- Designed a pipeline for data processing which converts raw HTML into a structured CSV format then into word frequency analysis
- Ensured robust error detection and handling for network issue and access restrictions

PROFESSIONAL EXPERIENCE

The Equitable Bank (5/25-8/25)

IT Intern

- Administered and deployed windows OS updates across company machines to ensure security compliance and performance.
- Assisted with hardware updates and maintenance.
- Collaborated with IT coworkers to troubleshoot technical issue and assisted coworkers with technical issues in a professional, friendly and efficient manner

Additional customer service representative employment details from 2020 to present is available upon request.

LEADERSHIP | CO-CURRICULAR INVOLVEMENT | COMMUNITY SERVICE

MSOE AI Club

Member

9/23 – Present

St. Agnes Food Pantry

Volunteer

Year Round

Wauwatosa West High School Best Buddies

President

9/21-5/23

- Fostered an inclusive and encouraging environment for a diverse population of students
- Led and facilitated effective communication between mentors and mentees in regular meetings and numerous and various outside events
- Led and organized schoolwide events with 30+ participants and multiple regular attendees.