Charles A. Nortrup

Email: augnrtrp@gmail.com | Phone: (414) 712-5730 | LinkedIn: linkedin.com/in/charles-nortrup

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 structed 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   9/23 – Present
Member
St. Agnes Food Pantry   Year Round
Volunteer
Wauwatosa West High School Best Buddies   9/21-5/23
President
* 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.