

# Nicholas Kelly

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## Objective

Seeking an internship that will allow me to improve my abilities in computer science while gaining more practical experience in a professional setting.

## Education

University of Minnesota, Twin Cities

Bachelor of Science in Computer Science, May 2024      GPA: 4.0/4.0

## Coursework

- Advanced Data Structures
- Advanced Programming Principles
- Intro to Statistical Analysis
- Machine Architecture
- Intro to Artificial Intelligence

## Projects

[Dynamic Memory Allocator \(C\)](#)

- Implemented the malloc() and free() functions in C. Used multiple explicit free lists separated by size to obtain high efficiency and avoid memory fragmentation. Achieved a memory utilization rate of 64.3% on average over a wide set of standard test cases.

[Wordle Game AI \(Python\)](#)

- Developed an AI to play the popular word-guessing game Wordle. Used information entropy to rank each possible guess. The AI solved every word in the Wordle dictionary with an average of 3.43 guesses.

[Battlecode 2023 \(Java\)](#)

- Developed an AI in Java to compete in MIT's 2023 Battlecode competition. Utilized a breadth-first search for pathfinding and encoded game details in 16-bit integers to facilitate inter-robot communication. Placed 17-32<sup>nd</sup> in US qualifiers.

## Work Experience

[Chipotle Mexican Grill | Line Cook \(May 2022 – September 2022\)](#)

- Managed cash and digital transactions. Prepared and served food while maintaining food safety standards.

[Bruegger's Bagels | Crew Member \(June 2021 – August 2021\)](#)

- Greeted customers, made food as ordered, and cleaned at end of shifts.

## Activities

- UMN Solar Vehicle Project
- UMN Chess Club
- Distributive Education Clubs of America – DECA