

# ANDREW LU

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## EDUCATION

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### University of Wisconsin, Madison

September 2022 - Present

B.A. in Computer Science

Relevant Coursework: Deep Learning for Computer Vision, Data Structures and Algorithms, Calculus (I,II,III), Linear Algebra, Discrete Mathematics, Introductory Computer Engineering

Overall GPA: 4.00

## PROJECTS

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### Battleship Game

May 2021 - June 2021

*Java*

*Personal Project*

- Used object oriented programming and Java Swing and other Java GUI components to create a working GUI for the game Battleship.
- Program allows for single player gameplay against the computer with options to change the difficulty of the computer.

### Competitive Programming

June 2021 - Present

*C++ and Java*

*Personal Project*

- Participated in daily competitive programming challenges on Leetcode
- Solved 100+ problems on Codeforces and 100+ problems on Leetcode
- Developed knowledge on applying data structures and algorithms to solve problems, such as minimum spanning trees, dynamic programming, and segment trees
- Developed a considerable understanding of C++ STL and how to use it to solve problems
- Developed a strong understanding of time and space complexity, and how to optimize code to run faster

### Blackjack Calculator

January 2023

*JavaScript*

*Personal Project*

- Used JavaScript to create a script for a blackjack calculator that advise the user on how to bet based on the cards left in the deck.
- Uses card counting to determine the probability of the user winning the hand and the probability of the dealer busting.
- Then used the card counting data to calculate the optimal bet size using the Kelly Criterion.
- Attached the script to a public website online which calculates the optimal play for any given hand, given the cards left in the deck.

## TECHNICAL STRENGTHS

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### Computer Languages

Java, C++, Python, JavaScript

### Tools

Git, GitHub, Visual Studio Code, Google Colab, Linux, Windows, LaTeX

## AWARDS

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1590 SAT Score (Math: 790, Reading: 800)

Summa Cum Laude (3.98 GPA) at Eastview High School

National Merit Commended Student

AP Scholar with Distinction

AIME Qualifier

## INTERESTS

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**Technical Interests**

Deep Learning, Data Structures and Algorithms, Applied Mathematics

**Other Interests**

Chess, Basketball, Video Games, Swimming, Music, Yu-Gi-Oh!