

ANDREW LU

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EDUCATION

University of Wisconsin, Madison

September 2022 - Present

Expected Graduation: May 2025

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

Current Overall GPA: 4.00

PROJECTS

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.

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

September 2021 - Present

C++ and Java

Personal Project

- 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
- Participated in daily competitive programming challenges on Leetcode
- Solved 100+ problems on Codeforces and 100+ problems on Leetcode

TECHNICAL STRENGTHS

Computer Languages

Java, C++, Python, JavaScript

Tools

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

AWARDS

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

Technical Interests

Deep Learning, Data Structures and Algorithms, Applied Mathematics

Other Interests

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