

NICHOLAS GAO

+16099686601 ◇ nicholasgao3@gmail.com

EDUCATION

The University of California San Diego

September 2021 - June 2025

-Bachelor in Mathematics And Computer Science and Minor in Cog-Sci w/ specificity in A.I.

COURSES

- CSE 8A/8B: Object Oriented Programming, Java/Python, Hashmaps/HashTables, Queue/Stack
- CSE 100: C++, Adv. Data Structures(Collisions, Treaps, RSTs, AVL, Red-Black Tree, TST, BST, Min-Heaps, Bloom Filter, Count-Min Sketches, Aho-Corasick, BWT, Suffix Array, Huffman Coding)
- CSE 15L: Version Control Systems, GIT, BASH, Command Line
- CSE 30: C, ARM Assembly, UNIX Environment, Heap and Stack Memory, Pointers/Addresses
- MATH 183: Differential Equations and Statistical Methods
- MATH 109: Mathematical Reasoning

SKILLS

- Tools: GIT, SSH, BASH, Version Control Systems
- Languages: Python, Java, C, C++, Assembly
- Soft Skills: Chinese, Art and Crafts

PROJECTS: [GITHUB.COM/NGAO176](https://github.com/ngao176)?TAB=REPOSITORIES

- Green Screen: Function that takes in the pixels of two images; one an image with a green screen and the other a background, then returns the image but with the green screen replaced by the background.
- 2048: Mimicked of the game 2048 using Object Oriented programming in Java.
- Maze Solver: Implemented BFS and DFS search orders utilizing stacks and queues in Java.
- Dictionary: An interactive command-line dictionary made in C
- Wordle: My own version of Wordle made in C in which the user can specify difficulty, the length of the target word, and the number of attempts allowed.
- Huffman: Using C++ we are able to compress and uncompress files using Huffman Coding

LEADERSHIP EXPERIENCE

-East Brunswick Youth Council:

Sep 2017 - Jun 2021

Helped organize community and school events and programs, thus contributing in acts of teamwork and communication. This promotes important aspects in a person such as community building, self-improvement, and education

-Tutoring:

Sep 2017 - Present

Tutored students to complete working assignments, identify lagging skills, and correct weaknesses to improve academically. As a part of learning should be helping and teaching those willing or in need to learn

AWARDS & HONORS

- Award of Excellence in International Art Festival
- Art Recognition East Brunswick High for Outstanding Art
- Top 20 teams in UCSD Hackathon Event