# Michael J. Allen

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#### Education

Northwestern University: Weinberg College of Arts and

Evanston, IL

Sciences Bachelors of Arts in Computer Science, June 2023

Cumulative GPA: 3.59 Dean's List: 3x

Coursework: Human Computer Interaction, Programming Languages, Design & Analysis Algorithms, Game Design & Development

### **Technical Skills**

Computer: Experienced with Python, Racket, C, C++, C#, HTML, Javascript, Canva, Glitch

Math: CS related proof work, Real Analysis, Linear Algebra, Multivariable Calculus

### **Technical Projects**

## **Chess Project**

- Used object oriented programming to keep track of all the individual chess pieces and make sure they moved correctly according to the rules.
- Programmed sprites and changed the color of the game board when a winner is determined.

## **Trip Planner**

- Program that planned the shortest route from starting point to a specific location given a set of positions.
- Designed an implementation of Dijkstra's Algorithm to search across a graph I build out of the set of positions and find the shortest path.
- Utilized Dictionaries and Binary Heaps to keep track of data.

## **Optimizing Programs**

- Operated within an existing, significant codebase to write a parallelized version of a program to optimize the performance of a program analyzing signals, searching for interference.
- Designed an algorithm that schedules all high priority jobs and the maximum possible number of low priority jobs without overlap that runs in linear time.

#### **Technical Experience**

## ASG Presidential Campaign, Website Design

February 2022 - April 2022

- Utilized Squarespace and Canva to develop and implement a website for a winning student body presidential campaign.
- Continually made updates of new policy initiatives and student org. endorsements throughout the election season to help increase voter turnout by 40%.

## **Leadership Experience**

## Northwestern Associated Student Government, Campus Life Committee Member

2021 - Present

- Collaborated on projects aimed to improve housing and dining facilities on campus.
- Coordinated an effort to expand menstrual product access in residential buildings, all gender housing and dining options for students with dietary and religious restrictions.

### **Work Experience**

# All Four Fun, Operations Aid

2016 - Present

- Operations aid at a company which offers inflatable rentals to customers from small backyard parties to large corporate and church events.
- Daily work consisted of delivery, set up, and maintenance of arcade games, inflatable jumpies, tents, tables, and chairs.
- Routinely worked in various sized groups depending on the requirements of an event.

#### **Extracurricular Activities**

## Planned Parenthood Generation Action, Member

2022 - Present

Northwestern Symphonic Band and Northwestern Percussion Ensemble, Member

2019 - 2020

### Skills

Language: 4 years of Latin, Written and Oral Proficiency in Japanese