

# Miles Sitcawich

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## EDUCATION

### Vanderbilt University

Bachelor of Engineering, Chemical Engineering

Nashville, TN

Expected May 2024

**Second Major:** Applied Mathematics

**Minors:** Computer Science, Physics, Chemistry

**GPA:** 4.00/4.00

**ACT:** 35

**Honors:** William A. Ma Award (Most Outstanding Sophomore in ChemE), ΣΠΣ Physics Honor Society, Dean's List (all semesters), National Merit Scholarship, National AP Scholar, Minnesota Triple-A Award (Athletic, Academic, Artistic), Japanese American Citizens League Scholarship

## PROFESSIONAL DEVELOPMENT / LEADERSHIP

**Vanderbilt University**, Young Lab, Dept. of Chemical and Biomolecular Eng. (Focus: metabolic eng.)

Nashville, TN

*Undergraduate Researcher*

January 2022 – Present

- Won VUSE (Vanderbilt Engineering) summer research program stipend to continue research over the summer
- Performed cyanobacterial genetic transformation, metabolite extraction and derivatization, GCMS, and GCMS data analysis for six hrs/wk during the semester and 40 hrs/wk over the summer
- Used machine learning and other data science techniques to improve lab's proprietary program, MUISCA, namely the sections that predict compound composition from molar mass and the validity of a potential compound from GCMS M1/M0 ratios

### Vanderbilt University

Nashville, TN

*Computer Science Teaching Assistant*

January 2022 – May 2022

- Proctored exams in CS 1104 Programming and Problem solving with Python (intro class)
- Held three office hours per week, helping students with if/else branching, function calls, for/while loops, files, and containers
- Graded exams and programming assignments for two hours a week using Slack, GitHub, codePost, and Gradescope

### Vanderbilt Men's Club Soccer

Nashville, TN

*Secretary*

September 2021 – Present

- Presided over team Instagram page and grew its following by 30%, took practice attendance, assisted president in planning practices, performed team laundry, distributed release forms to away teams and arranged ice and coolers at home games
- 15% tryout acceptance rate; four hours of practice and one game each week

### Amazon

St. Paul, MN

*Whole Foods Market Shopper*

December 2020 – January 2021

- Fulfilled roughly 10 online orders per shift by selecting, sorting, and packing groceries and other products into bags

### Sharper Management

Woodbury, MN

*Pool Attendant*

June 2020 – August 2021, Seasonal

- Checked roughly 15 residents in per day, sanitized pool deck and bathrooms twice per shift, maintained occupancy at safe levels, de-escalated conflicts when residents key fobs were not functional
- Trained four new employees in using key fobs, iPads to track occupancy, sanitizing the area, and locking away equipment

## PROJECTS

### "Are You Smarter than a 5<sup>th</sup> Grader?" Quiz game

May 2022 – July 2022

- Used ReactJS and CSS media queries to create a quiz game inspired by the TV show and YouTube video renditions
- Click through 10 questions, answer buttons light up green/red depending on choice, score tracked throughout

### Online Portfolio

May 2022 – July 2022

- Used HTML, CSS, and GitHub Pages to host website about me with links to other projects

### Expression Tree (Command-line Calculator)

April 2022

- Four-week class project (in C++) for CS 3251 Intermediate Software Design
- Prints and evaluates expressions with integers, variables, and 10 arithmetic operators; keeps track of stats and history
- Over 8,000 lines of code; utilized Gang of Four patterns to operate in two different modes, keep track of state, parse input (including commands and expressions), build expression tree, and output result

## INTERESTS, SKILLS, & CERTIFICATIONS

**Software:** (Proficient): C++, Python, (Familiar): MATLAB, Excel, HTML/CSS, JS, ReactJS, Git, Quartus, Aspen

**Certifications:** SChE ELA950 Introduction to Process Safety (2021), SChE ELA951 Hazard Recognition (2021)

**Interests:** Cooking, Politics, Weightlifting, Running, Soccer, Anime