

Matthew Schwarz

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Education

Vanderbilt University , Nashville, TN	Expected May 2024
<ul style="list-style-type: none">• GPA: 3.87 / 4.00 SAT: 1570 (800 Math, 770 Verbal)• Majors: Computer Science Medicine, Health, & Society	
Charlotte Latin School , Charlotte, NC	May 2020
<ul style="list-style-type: none">• Unweighted GPA: 4.00 / 4.00	

Experience

Morrison Family YMCA , <i>Camp Counselor</i> , Charlotte, NC	June - August 2021
<ul style="list-style-type: none">• Responsible for coordinating and safely engaging ~20 campers each day	
Active Galactic Nuclei , <i>Research Assistant</i> , Vanderbilt University	August 2020 - May 2021
<ul style="list-style-type: none">• Collaborated with four team members in studying supermassive black hole phenomena• Provided weekly research reports and engaged in problem solving with team members• Independently developed programs to analyze spectral data sets from quasar observations• Generated spectral decomposition plots using PyQSOFit	

Projects

Universe Simulator
<ul style="list-style-type: none">• Models all orbital bodies within a universe and simulates their motion over a time period• Utilizes design patterns such as the visitor, factory, and singleton patterns
Stock Volatility Analysis
<ul style="list-style-type: none">• Analyzes and visualizes the volatility of stocks using Pandas and Yahoo Finance API
Text Twist Solver
<ul style="list-style-type: none">• Quickly calculates all solutions to a game of Text Twist using a lexicon stored in a Trie
Maze Pathfinder
<ul style="list-style-type: none">• Solves a maze using BFS and DFS pathfinding algorithms, visually tracing the search

Leadership

Beta Theta Pi , <i>VP of Finance</i> , Vanderbilt University	October 2021 - Present
<ul style="list-style-type: none">• Directed and managed fraternity funds in excess of \$10,000	
Code Ignite , <i>Teaching Assistant</i> , Vanderbilt University	September 2021 - Present
<ul style="list-style-type: none">• Taught ~10 middle school students computer science and problem-solving principles• Utilized web-based tools such as Scratch to facilitate engagement and learning• Developed a Java curriculum for middle and high school students	

Skills and Interests

Skills: Eagle Scout | SCUBA Diver (75+ Ocean Dives) | National Spanish Honor Society

Technical: C++ | Python | Java

Relevant Coursework: Object Oriented Programming | Data Structures and Algorithms
Design Patterns | Discrete Math | Multivariable Calculus | Economic Statistics

Interests: Weightlifting | Camping | Travel