# Zachary Szeto

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## EDUCATION

**Worcester Polytechnic Institute**                                                        **August 2022 - May 2026**
- Bachelor of Science in Computer Science - GPA: 3.75                                                     *Worcester, MA*
- Relevant Coursework: Systems Programming, Intro to Program Design, Algorithms, Object-Oriented Design, Software Engineering, Operating Systems, Foundations of CompSci, Networks, Intro to Machine Organization and Assembly

## SKILLS

Java • Python • C++ • C • Racket • HTML and CSS • MatLab • IntelliJ • Eclipse • Visual Studios • WebFlow • Figma • Unity Engine • JavaScript • React • NodeJS • Git • Native Fluency in English • Conversational Spanish

## PROJECTS & RESEARCH ([Learn More](#))

**Chess Engine**                                                                          **June - August 2023**
- **C-based** chess engine employing bitboards, bit manipulation, and efficient move generation techniques.
- Utilizes **Alpha-Beta Pruning** and **Iterative Deepening** for optimized search processes, a Principal Variation Table for storing best moves, and Lazy SMP for efficient multi-core processing to enhance evaluation and search speed.

**DSA Visualizer**                                                                        **April - June 2023**
- **Innovative Visualization Tool** powered by **React**, designed to aid students in mastering Data Structures and Sorting Algorithms. Offers interactive visualizations, step-by-step explanations, and real-time code demonstrations to provide an engaging and comprehensive learning experience for students.

**Transportation Data Analysis and Optimization**                                         **March - May 2023**
- **Developed** a robust **Java** program to identify GPS location, travel hubs, and overlapping flights of Southwest and Delta by analyzing flightmaps.
- **Analyzed** America's highway network to compute the shortest path from the East coast to West coast.

**Discord Music Bot**                                                                     **June - July 2023**
- **JavaScript** and **Node.js** based Music Bot that leverages Discord's powerful API. Seamlessly responds to users' commands and swiftly accesses the internet to fetch specific songs and playlists.
- Implements features such as responding to commands, **array methods**, and **async/await promises.**

## VOLUNTEER WORK

**Universal Education Initiative**                                                         **May 2023 - Present**
*Lead Website Developer*
- **Designed** and **built** the organization's website using WebFlow and Figma
- **Produced** computer science-related curriculum for children in developing countries specifically Merida, Venezuela

**Mashpee Recreation**                                                                    **June 2018 - August 2019**
*Camp Counselor*
- Volunteered 30 hours a week designing and implementing activities that encouraged curiosity and creativity among campers (k-8th)

## Work Experience

**Burrito Bistro**                                                                        **June 2021 - August 2022**
- **Facilitated** communication between customers and the kitchen while performing numerous other roles including cashier, customer service and maintenance

## ACTIVITIES

**FRC and FLL Robotics**
*Programmer and Student Mentor*
- **Founding member** of the Brain Busters Robotics Team, **a STEM nonprofit** providing extracurricular STEM opportunities to students 5-12 in the form of **robotics competitions & education**.
- **Facilitated & mentored** younger students in FLL, mentored & supported build teams.
- **Massachusetts State Champion** in FIRST Lego League and went to the World Championship in Detroit, Michigan

**Society of Asian Scientists & Engineers**
*Event Committee*
- Developed programming to aid incoming freshmen acclimate and presented proposals to the executive board