# SHENG HUANG

+1 (315)-704-9115

shengh@mit.edu

## MIT CS Undergrad

## EDUCATION

**Massachusetts Institute of Technology** - ***M.Eng. GPA: 4.7 / 5.0*** **Spring 2025**

• **Classes:** Computer Networks; Computer Systems Security; Cognitive Robotics; Database Systems

**Massachusetts Institute of Technology** - ***B.S. GPA: 4.7 / 5.0*** **Spring 2024**

• **Completed Coursework**: Computational Architecture; Discrete Math; Data Structures and Algorithms; Fundamentals of Programming; Embedded Systems; Linear Algebra; Design and Analysis of Algorithms; Artificial Intelligence; Software Engineering; Robotics; Computer Systems Engineering;

• **Fall 2024**: Software Studio; Performance Engineering of Software Systems

## EXPERIENCE

**Software Engineering Intern** - ***Capital One*** ***Richmond, VA*** **Summer 2023**

• Developed Spring Boot API that generates custom files, resulting in a dynamic webpage.

• Implemented an additional layer of input validation, leading to enhanced backend security.

• Created and deployed failed backend request logging, enhancing user information and sped up debugging process.

• Restructured code design, preventing aliasing bugs and creating easy readable code.

• Established foundational classes for backend, enabling faster code development and deployment by other teammates.

**Research Software Developer** - ***MIT EECS*** ***Cambridge, MA*** **Summer 2022**

• Implemented algorithms to filter n-grams from dataset, creating organized and comprehensible data.

• Developed a robust data filter system by extracting metadata frequency from Google Books JSON API.

• Optimized software performance by implementing caching, resulting in a 50% reduction in execution time.

• Reduced file storage by 75% through a unique file format and ASCII characters, leading to faster data loading.

**Software Developer** - ***MIT Material Science*** ***Cambridge, MA*** **Spring 2022**

• Formulated algorithms for cataloging and comparing chemical data for unique compounds.

• Devised and implemented frontend informative graphs for calculations, enhancing the visualization of reactivity.

• Optimized algorithms by leveraging efficient data structures, resulting in a 20% improvement in runtime efficiency.

## Personal Projects

**Star Battle (Video Game)** - *Typescript; HTML; CSS* **Spring 2023**

• Starbattle based video game that handles concurrent user inputs with typescript server backend communication.

**Autonomous Racecar** - *Python; C++; ROS* **Summer 2022**

• ROS engineered autonomous race car with advanced computer vision to maintain precise lane positioning.

**Real Life Mario Kart** - *C++; Arduino; Python; SQLite* **Spring 2022**

• Mario Kart inspired RC car racer with real time communication to Python server and physics simulation using ESP32.

## Languages and Tools

Typescript; Java; Python; C++; Lua; HTML; CSS; Assembly; ROS; SQLite; REST API; JSON API; Markdown; Latex; Git