SHENG HUANG

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MIT CS Undergrad

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EDUCATION

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 visually 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++; ROS; HTML; CSS; Assembly; SQLite; REST API; JSON API; Markdown; Latex; Git