SHENG HUANG

MIT CS Undergrad

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EXPERIENCE

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

- Spearheaded the implementation of algorithms to filter n-grams from metadata dataset, creating comprehensible data.
- Developed a robust data filter by extracting metadata frequency from Google API, enabling accurate data analysis.
- 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.

Data Science Intern - ***Ek Kadam Aur*** ***Cambridge, MA*** **Summer 2022**

- Developed a data collection system for disabled students, resulting in improved educational support and planning.
- Utilized data structures and object oriented programming, leading to an overall 20% execution speed increase.
- Engineered and designed GUI interface, enabling easier access and interpretation of student data.

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

EDUCATION

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

- **Completed Coursework**: Computational Architecture; Discrete Math; Fundamentals of Programming; Embedded Systems; Linear Algebra; Design and Analysis of Algorithms; Artificial Intelligence; Software Engineering; Robotics; Computer Systems Engineering;
- **Spring 2022**: Software Studio; Performance Engineering of Software Systems

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

Python; C++; Java; HTML; CSS; Assembly; Minispec; SQLite

Visual Studio; Vim; REST API; JSON API; Jupyter Notebook; Markdown; Latex