Cambridge MA 02139

Sheng Huang

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Education

Cambridge, MA **Massachusetts Institute of Tech.** **Sep 2020 - May 2025**

- **M.Eng. in Computer Science, May 2025.** GPA: **4.7** / 5.0
  - **Graduate Courses:** Computer Networks; Systems Security; Cognitive Robotics; Database Systems;
- **B.S.E. in Computer Science, May 2024.** In-major GPA: **4.7** / 5.0.
  - **Undergraduate Courses:** Computational Architecture; Discrete Math; Data Structures and Algorithms; Fundamentals of Programming; Embedded Systems; Design and Analysis of Algorithms; Artificial Intelligence; Software Engineering; Robotics; Computer Systems Engineering; Software Studio; Performance Engineering of Software Systems;

Employment

Software Engineer, Intern **Capital One** **Summer 2023**

- Developed Spring Boot API that generates custom files, resulting in dynamically generating web pages.
- Introduced an additional layer of input validation, leading to enhanced back-end security for 3 departments.
- Created and deployed failed back-end request logging, leading to a 30% decrease in resolution time .
- Established foundational classes for back-end, decreasing code development for the team by 70%.

Research Software Developer **MIT EECS** **Summer 2022**

- Engineered algorithms to filter n-grams from data set, creating 1GB of organized and comprehensible data.
- Developed a robust data filter system using Google API, decreasing irrelevant data appearance by 65%.
- 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 20% faster loading.

Software Developer **MIT Material Science** **Spring 2022**

- Formulated algorithms for cataloging unique compounds data, leading to 50% faster code execution time.
- Devised front-end UI elements for calculations, yielding a better field for informing users.
- Optimized algorithms by leveraging data structures, resulting in 20% improvement in run time efficiency.

Technical Experience

Projects

- **Star Battle**
  - Worked within a **scrum** team to develop a user based input video game based on the popular Star Battle.
  - Developed safe and beautiful code using **OOP** and **TypeScript**.
  - Created a feature where the application handles **concurrent** inputs from users.
  - Extensive focus on testing using **NPM**.
  - Created **asynchronous back-end server communication** to retrieve and store games.
- **Real Life Mario Kart**
  - Built a RC car from the ground up using **C++** and **Arduino**.
  - Created **back-end Python server** and **real time communication** to ESP32 controller.
  - Utilized **C++ physics simulation** for better user inputs.

Technical Skills

- Languages: C++; Java; Python; Typescript; JavaScript/HTML/CSS;
- Frameworks and Libraries: Springboot; Fast API; Node.js
- Tools: Git; Linux; AWS (DynamoDB); Maven; Gradle;