

Software Engineering Experience

Undergraduate Researcher MIT EECS Summer 2022

- Designed and programmed algorithms to create and sort n-grams from 10TB of online metadata.
- Implemented online API integration by creating tool which extracts important metadata from APIs.
- Optimized software by implementing file caching, leading to 50% reduction in running time.
- Reduced file storage spaces by 75% by utilizing different file format and ASCII characters which led to faster file load speeds.
- Created and designed GUI interface for easier use of algorithms.

Data Science Intern Ek Kadam Aur Summer 2022

- Created system on collecting and interpreting data for disabled students in a classroom setting, which have the potential of leading to a newer style of teaching methods for certain students.
- Designed data structures which lead to an overall 20% efficiency increase.
- Engineered and designed software for easier access and interpretation of student data.
- Reduced student information file storage by utilizing different file format, leading to faster file loading / writing speeds.

Research Software Developer MIT Material Science Spring 2021

- Created algorithms and graphs for processing chemical data for unique compounds, leading to a better informative visual about the reactivity of the compound.
- Optimized speed of algorithms by implementing separate data structures, which increased speed by 20%.
- Published code along with graduate student research for the use by other colleges / research offices.

Education

Cambridge, MA Massachusetts Institute of Tech. Spring 2024

- B.S.E. in Computer Science and Electrical Engineering. **GPA: 4.7 / 5.0.**
- Coursework: Computational Structures; Math for CS; Intro to Algorithms; Fundamentals of Programming; Embedded Systems; Multi-variable Calculus;

Projects

- **Real Life Mario Kart** (2022). Inspired by Mario Kart on the Switch, designed and created a real life version of Mario Kart by software, hardware, and server side code. **C++; Arduino; Python; SQL-Lite; ESP32; API;**
- **Personal Weather Man** (2022). Created a personal "weather man" that scrapes data from weather API for accurate weather information by means of software and hardware. **C++; Arduino; API; ESP32; JSON;**
- **Performance Data Analyzer** (2022). Designed and engineered a data analyzer / cleaner. Application identifies relevant / important information and categorizes data. **Python; CSV;**
- **Restaurant POS System** (2021). Digitizes restaurant menu which in turn created a fast and efficient working environment for both customers and managers. **Python; SQL-Lite;**

Languages and Technologies

- **Python** (expert); **C++** (moderate); **Java** (prior experience); **HTML** (fluent); **CSS** (prior experience); **Assembly** (prior experienced); **Minispec** (prior experienced); **SQL-Lite** (prior experience);
- Visual Studio; Vim; Nano; JSON; Database; Online API;