Lucas Lee

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EDUCATION

Yale University   **Aug 2022 - Present**
New Haven, CT
- B.S. Computer Science, Molecular Biophysics & Biochemistry, expected Spring 2026 | GPA: 3.92
- Relevant Coursework: Biology Sequence, Advanced General Chemistry with Laboratory, Data Structures and Algorithms, Systems Programming & Computer Organization

SOFTWARE DEVELOPMENT & RESEARCH EXPERIENCE

Undergraduate Researcher, Yale Batista Laboratory   **Nov 2022 - Present**
- Developed and tested algorithms in determining allosteric paths within proteins based on molecular dynamics to illustrate the effects of perturbations on correlation networks
- Created and presented extensive data visualizations at collaborations and group meetings
- Wrote a proposal for and completed a research project funded by the Yale Summer Research Fellowship

Software Development & Research Intern, Redesign Science   **Sep 2021 - Aug 2022**
- Performed research in helping to train and validate results of machine learning derived docking scores between ligands and proteins
- Worked as a paid intern to personally created a visualization application for the display of interactive graphs showing clustering of protein-ligand interaction fingerprints

Head of Software Engineering, FTC Robotics @ Stuyvesant High School   **Sep 2019 - Jun 2022**
- Developed software at daily meetings for the robot mechanisms, over 20 autonomous programs, and teleop movement mapped to remote controls
- Worked with other members of the software team to code Java files used to successfully to win competitions and qualify for 2020 World Championship and the Maryland Tech Invitational 2022; implemented the use of computer vision in the autonomous program
- Mentored other members of the team less familiar with Java and assisted in the design process and electronic wiring of the robot

Data Science for Health and Medicine, BWSI @ MIT   **Jul 2021**
- Studied techniques for data aggregation, preprocessing, and analysis to use in machine learning models
- Implemented and evaluated various classification models using neural networks for discrete, signal, visual, and audio data to predict certain diseases and abnormalities

iOS Integration Intern, HKP Solutions   **Sep 2020 - Jun 2021**
- Learned and used SwiftUI to create frontend UI for an iOS app from design mockups and was tasked with resolving and dealing with pull requests and merge conflicts from coworkers' code
- Worked closely with the other teams in order to integrate frontend with backend APIs using JSON endpoints and helped to create user authentication methods for the application
- Presented and demoed work completed to others in presentation formats to communicate progress

Junior Software Developer Intern, ECS Federal   **Jun 2020 - Aug 2020**
- Worked as a paid intern remotely at ECS Federal in order to aid in the processing of video data
- Learned to use Wireshark to test and collect data on packet I/O as well as the workings of MPEG compression to analyze throughput
- Helped in producing visualizations of data using Python and used Elasicsearch, Logstash, Kibana to store data on Docker images

SKILLS

- **Computer** C, C++, Java, Python, pymol, HTML/CSS, JavaScript, Unix shell, vim, and git usage.
- **Language:** Conversational mandarin ability in speech, writing, and reading