

Lydia Chan

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Education

Stanford University, Bachelor of Science in Computer Science, Cumulative GPA: 4.0 / 4.0 06/2022

- **Completed Coursework:** Computer Systems from the Ground Up; Programming Abstractions; Linear Algebra, Multivariable Calculus, and Integral Calculus of Several Variables; Ordinary Differential Equations
- **Current:** Artificial Intelligence: Principles and Techniques; Mathematical Foundations of Computing

Computer Skills

Python, C++, Java, C, HTML/CSS, Bash, Assembly, Arduino, JavaScript, MATLAB, SolidWorks, Altium Designer, Ltspice

Technical Experience

Stanford Intelligent Systems Laboratory – Research Assistant 06/2019-Present

- Mapped large urban environments in real-time using the Bayesian Hilbert Maps technique on LiDAR data
- Presented at the 2019 Stanford Artificial Intelligence Laboratory and Toyota Research Institute Annual Review

Stanford Solar Car Project – Electrical Team 08/2018-Present

- Designed circuit boards for brake lights, turn signals, and the front headlights using Altium Designer software
- Ensured safe high-voltage pre-charge circuit for starting up the car, from 0V to 130V in 10 milliseconds

Stanford Chueh Research Group – Research Intern 07/2018-09/2018

- Benchmarked high-temperature electrical properties of over 10 atomically flat substrates
- Used cutting-edge imaging techniques to image substrates at atomic level

MIT Kulik Research Group – Research Intern 06/2017-07/2017

- Wrote Python and Bash scripts to analyze the breadth of search of a genetic algorithm, which explored over 5600 candidate structures to design spin crossover complexes, and ran thermochemical simulations on a GPU cluster

Computer Science Projects

Safe City – **Project Award Winner** – **Site 1001 Big Data Award (LA Hacks)** 03/2019

- Built user interface webpage (HTML, CSS, JavaScript, Bootstrap) to display safe walking routes, using Google Maps API and 1.96 million crime incident reports from Los Angeles city's open database

Stick Figure Camera (Computer Systems from the Ground Up) 03/2019

- Interfaced with a 64-pixel thermal camera over I2C protocol, on a bare-metal Raspberry Pi environment
- Rendered users as stick figures: by parsing thermal data and graphically implementing anti-aliased lines and circles

allo.k (TreeHacks) 02/2019

- Developed front-end of a Chrome Extension that provides health reminders to programmers to improve health habits

UCLA Tech Camp: Solar Power and Electrical Engineering 06/2016-07/2016

- Designed a speaker with a LM386 chip and 3D-printed case and programmed volume meter for speaker with Arduino

Leadership

Stanford Women in Computer Science – Intern Program Board 08/2018-Present

- Inaugurated new class of interns from over 55 applicants and paired them with relevant teams, projects, and mentors

Stanford Dragon Boat – Recruitment Head 08/2018-Present

- Recruited over 20 dragon boat members, and raced in the 2019 International Collegiate Dragon Boat Festival in China

Awards and Honors

Science Olympiad National Winner 08/2017-05/2018

2018 National Tournament: **1st Place Materials Science**, 5th Place Forensics, **1st Place Team**

- 2018 Southern California Tournament: **1st Place Astronomy**, **1st Place Materials Science**, **1st Place Team**
- 2017 National Tournament: 2nd Place Materials Science, **1st Place Team**

NCWIT Aspirations in Computing, National Honorable Mention 05/2018