# CHRISTINA LI

## COMPUTER SCIENTIST/MECHANICAL ENGINEER

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## WORK EXPERIENCE

**Vehicle Engineering Automation Intern,** SpaceX

June 2018-September 2018; Hawthorne, California

Developed software to eliminate recurring engineering tasks, evaluate vehicle performance against expected behavior. Major projects included developing automated system for sensor calibration for delta pressure transducer for first stage fuel/lox tank, and working on hardware safety system for vehicle to alert engineers when its operating outside qualified limits during testing.

**Student Researcher,** Landay Lab

June 2017-August 2017; Stanford, California

Developed a drone Stanford campus tour guide system. Worked on iOS system to perform image recognition (OpenCV) and flight control with a DJI Phantom 4. Also prototyped a physical onboard mount for the hardware to fly on the drone.

**Systems Manager,** Research Science Institute (RSI)

May 2016-August 2016; Cambridge, Massachusetts

Responsible for teaching RSI 2016 students how to use the Athena Computing System at MIT as well as how to write papers in LaTeX. Wrote scripts to streamline processes at RSI as well as perform assorted tasks as an executive staff member.

## PERSONAL PROJECTS/EXTRACURRICULARS

**Mechanical lead,** Mars Rover team

April 2017-Present; Stanford, California

Lead mechanical development of a Mars Rover for the University Rover Challenge. Aided design of drive base, chassis, and arm. TIG welded entire robot from water-jet aluminum sheet metal, aided manufacturing for one-off parts. During competition, lead testing in the desert environment and coached drivers during tasks, strategizing when to continue or skip tasks.

**Creator,** Hello World (tina98.github.io/HelloWorld/)

November 2014-Present; Sterling Heights, Michigan

Created and hosted a middle school day camp for girls in computer science. Awarded Microsoft Youthspark Challenge for Change, White House Champion of Change. Featured on Nickelodeon's TV show The Halo Effect and CNN's Young Wonders.

**Vice President of Controls,** ThunderChickens #217 FIRST Robotics (thunderchickens.org)

January 2014-June 2016; Sterling Heights, Michigan

Responsible for wiring and programming the robot my team built as well as teaching the new students C++. Led programming for swerve drive. Also illustrated a children's book Flooded!, and organized STEM outreach events like Robot Days/Robot Night.

**Scholar,** Research Science Institute

June 2015-August 2015; Cambridge, Massachusetts

Researched with MIT's Probabilistic Programming Group's machine learning system Venture. Created a SLAM (Simultaneous Localization and Mapping) algorithm that used AprilTags to determine a drone's obstacles and path from a video recording.

## EDUCATION

**Stanford University**

September 2016-June 2020; Palo Alto, California

Computer science/electrical engineering major, focus in mechatronics and robotics. Mechanical engineering design minor. Involved in Stanford Solar Car Project (array, battery, mechanical team) and Mars Rover team.

Related coursework: Introduction to Robotics, Introduction to Mechatronics, Topics in Advanced Robotic Manipulation, Aerial Robot Design; Principles of Computer Systems, Digital Systems Design, Operating Systems; Design and Manufacturing

**Stevenson High School/Utica Center for Math, Science, and Technology**

September 2012-June 2016; Sterling Heights, Michigan

Graduated with a 4.21 GPA as valedictorian and Summa Cum Laude

## EXPERIENCE

- Software experience: C, C++, Java, Python, MATLAB; HTML, CSS, JavaScript, SQL; iOS (Swift), Android; Verilog
- Manufacturing experience: welding (TIG, MIG), machining (mill/lathe), CNC (mill), woodworking
- CAD experience: Solidworks, Autodesk Fusion 360
- Organizations-National Center for Women in Information Technology, White House Champions of Change, FIRST Robotics