CHRISTINA LI

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STANFORD SOPHOMORE

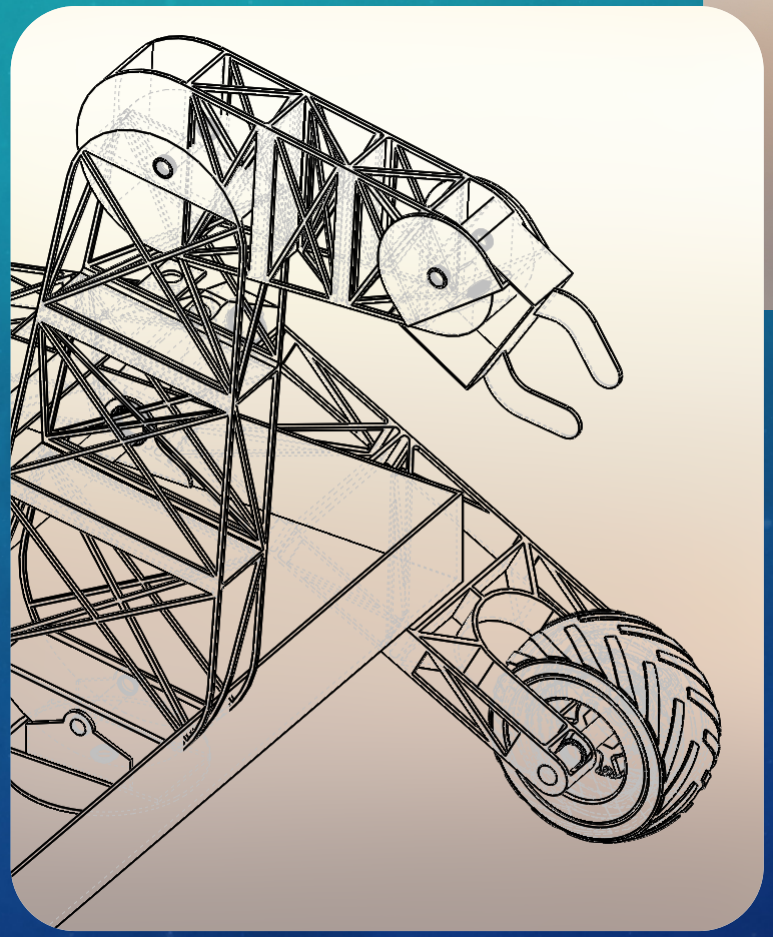
UNDECLARED: MECHANICAL ENGINEERING & COMPUTER SCIENCE

EXTRACURRICULARS/ PERSONAL PROJECTS

STANFORD MARS ROVER TEAM MECHANICAL LEAD

April 2017-present; Stanford, CA

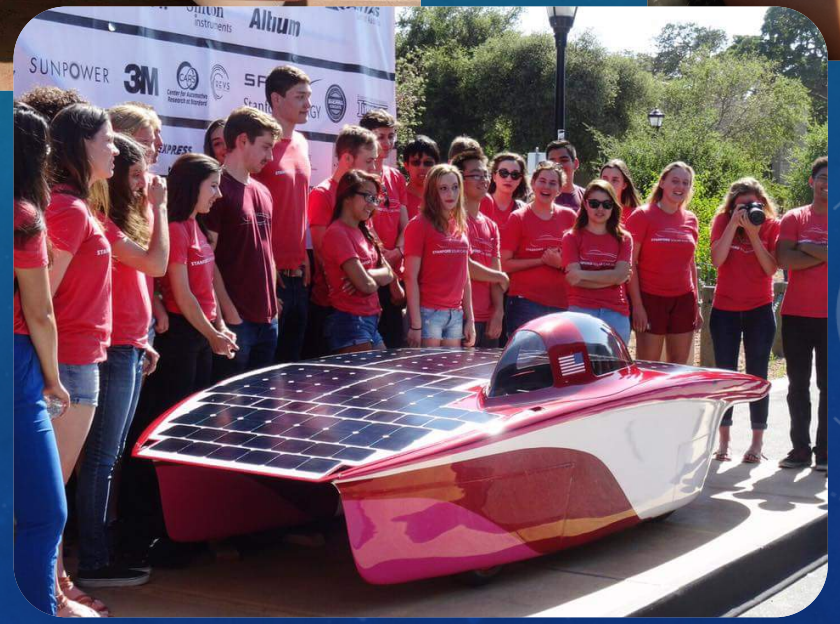
Currently designing the suspension, chassis, and robot arm for Stanford's inaugural team in the University Rover Challenge; using Solidworks Simulations to ensure the strength of designs; machining and welding mechanical components; overseeing testing of the rover before competition



STANFORD SOLAR CAR PROJECT ARRAY TEAM, BATTERY TEAM

April 2017-present; Stanford, CA

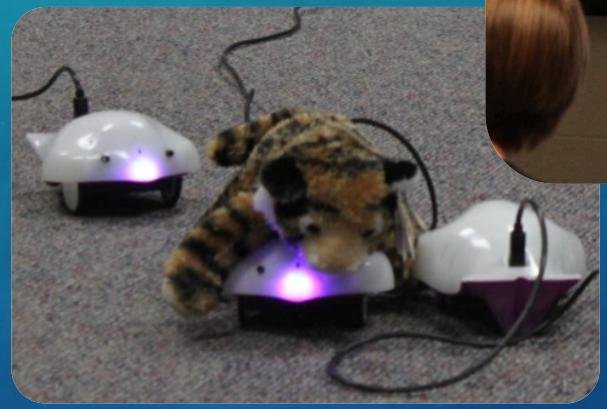
Soldered solar cells together to create modules; tested various composites to encapsulate more efficient array modules; attached array to the solar car for the 2017 World Solar Challenge; also spot welded part of the battery pack together



HELLO WORLD CREATOR

November 2014-present; Sterling Heights, MI

Hosted computer science camp for middle school girls to learn how to code websites, apps, robots, and games; hosted speakers from tech companies including Woodie Flowers from FIRST Robotics; hosted field trips to Google, University of Michigan, Microsoft, and GM; honored by Nickelodeon's HALO Effect, White House Champions for Change, and CNN's Young Wonders



#217 THE THUNDERCHICKENS VICE PRESIDENT OF CONTROLS

January 2014-June 2016; Sterling Heights, MI

Competitor for FIRST Robotics competition; programed in C++ for both the teleoperated and autonomous portion of the swerve drive robot for 2015 season; taught and led programmers for 2016 season; wired the control system every season; aided with some manufacturing as well as outreach efforts throughout the years

RESEARCH

STANFORD CURIS

June 2017-August 2017; Stanford, CA

Worked with Stanford's IxD lab in the Human-Computer Interactions department under Dr. James Landay; developed an autonomous drone tour guide system with projected interface to direct tourists to locations and displays information; used Phantom 4, iOS programming, and OpenCV

RESEARCH SCIENCE INSTITUTE

June 2015-August 2015; Cambridge, CA

Worked with MIT's Probabilistic Computing Lab under Dr. Vikash Mansinghka; created a simultaneous localization and mapping algorithm that used saved video footage from a drone to determine the locations of obstacles and flight path with the probabilistic computing system Venture

FAVORITE CLASS PROJECTS

ME203:
DESIGN & MANUFACTURING

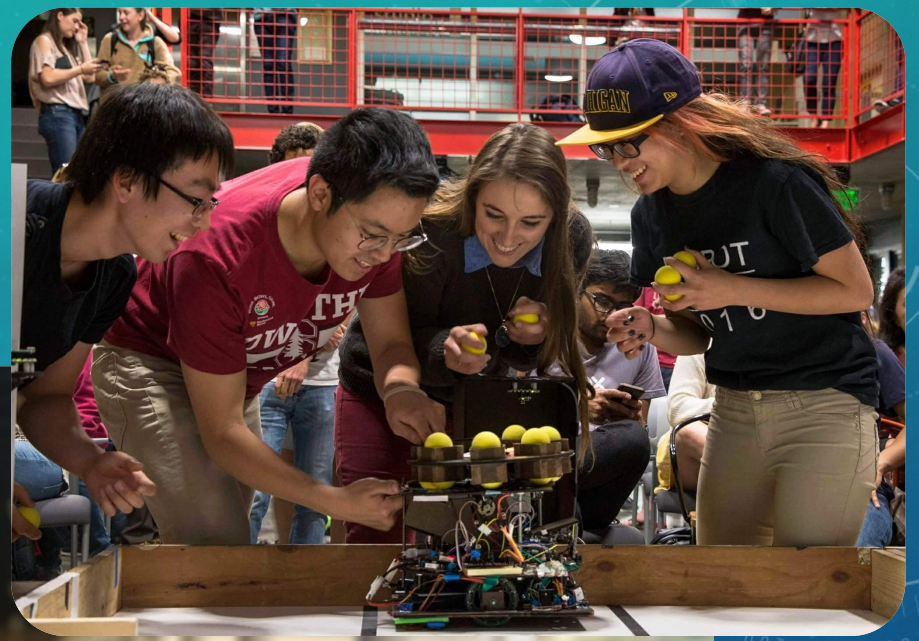
Spring quarter, freshman year

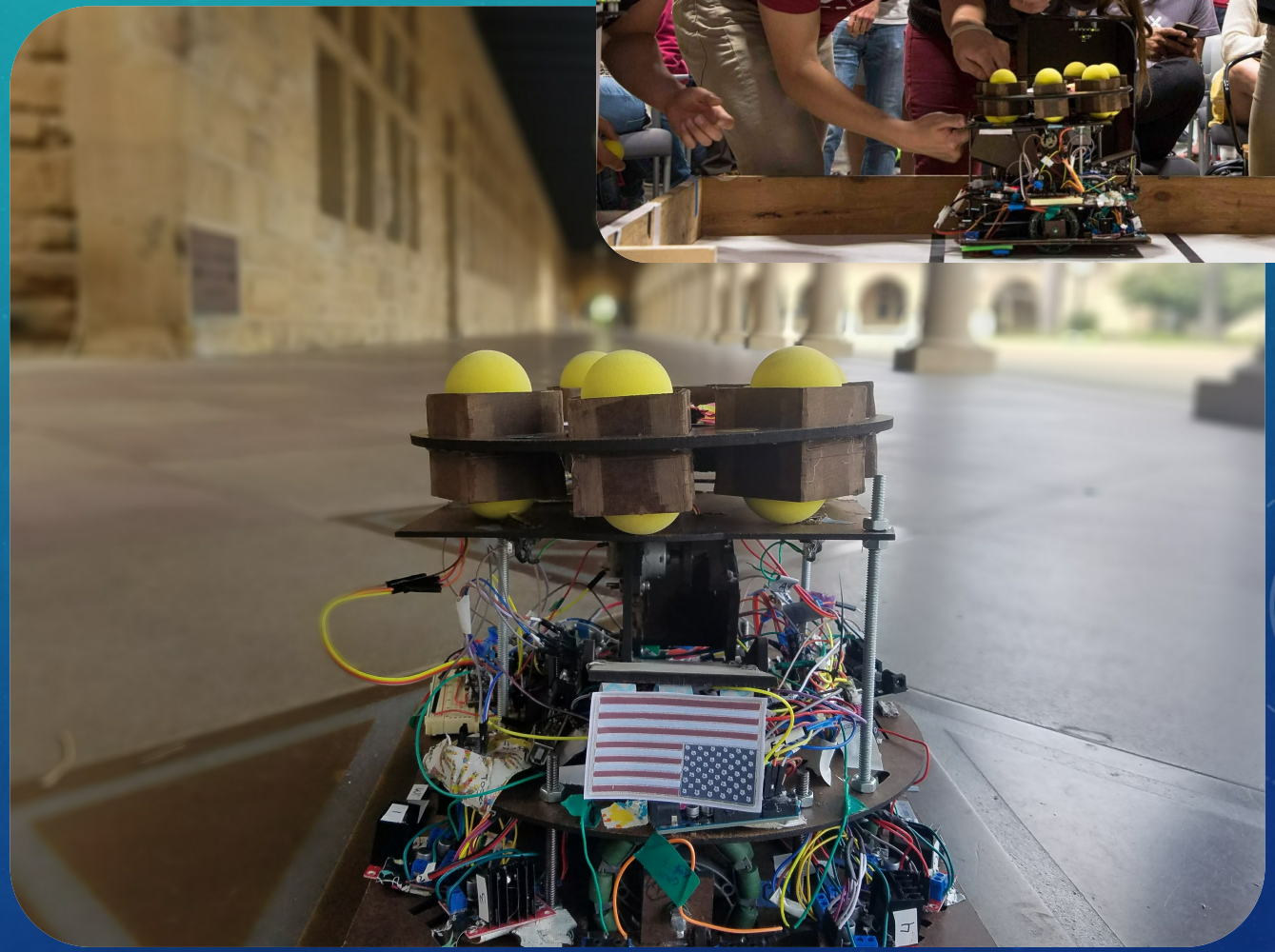
Graduate level class; Stanford's product realization class; learned machining (mill, lathe), welding, and casting; for the final project; designed a hand-turnable simple one cylinder piston to demonstrate how car engines worked

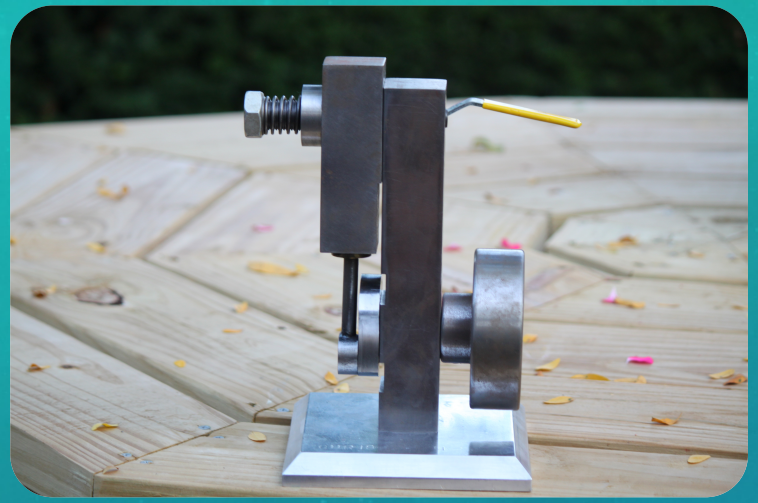
ME210:
INTRO TO MECHATRONICS

Winter quarter, freshman year

Graduate level course; worked with a team of three other students to create a fully autonomous robot in three weeks; learned electro-mechanical system design, how sensors work, rapid prototyping, etc.





MANUFACTURING EXPERIENCE

PRECISION MACHINING, WELDING (TIG, MIG), WOODWORKING