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I'm a sophomore currently studying Mechanical Engineering at MIT.

I'm interested in electric vehicles, robotics, manufacturing and design. In my free time I enjoy sailing, playing soccer and making things.

## **EDUCATION**

**Massachusetts Institute of Technology** - Cambridge, MA

Sep 2015 – Present

*Undergraduate*

*Class of 2019 - Mayor: Course 2 (Mechanical Engineering)*

**Relevant coursework:** *Mechanics and Materials I, Dynamics and Control I, Numerical Computation for Mechanical Engineers, Electronics for Mechanical Systems, Toy Product Design*

**Academia Británica Cuscatleca** - Santa Tecla, El Salvador

Graduate June 2015

*High School - IB Diploma Program*

## **EXPERIENCE**

**MIT FORMULA SAE Battery Pack** - Cambridge, MA

Aug 2016 – Present

- Designing a fully serviceable, two-finger safe enclosure for accumulator HV electronics capable of 80kW
- High Voltage component selection for battery pack
- Adhesive and bus bar insert testing for accumulator
- MATLAB fuse testing data processing and weight minimization

**LUCID MOTORS** (Formerly ATIEVA, USA, INC) *Powertrain Intern* - Menlo Park, CA

Jun 2016 – Aug 2016

- Designed fixtures for battery pack testing using Siemens NX
- Prepared thermal tests for both cell level and subunit testing
- Managed mechanical and adhesive testing for both cell level and subunit testing
- Served as a technician by helping assemble the 2<sup>nd</sup> ever Atieva powertrain

**MIT Electric Vehicle Team Mechanical Engineer** - Cambridge, MA

Sep 2015 – May 2016

- Worked on converting a gas Opel GT into a street-legal fully electrical car
- Worked with the battery sub-team designing the frame of the car that along with the belly-pan of the car will hold the batteries
- Used FEA in SolidWorks simulation to analyze the battery enclosure to prevent failure
- Designed and created different parts (spacers, motor controller) for the vehicle using SolidWorks

**MIT Edgerton Center Outreach Volunteer** - Cambridge, MA

Sep 2015 – Present

- Teach and introduce younger students into the idea of engineering, art and science
- Provide assistance to students on their personal projects
- Designed a night-light to teach over 100 students about basic electronics, art and science in Beijing, China

**MakerLodge Mentor** – Cambridge, MA

Sep 2016 - Present

- Train freshmen on using basic makerspace tools like laser cutters, 3D printers and hand tools
- Will eventually teach students higher tier machines such as lathes and mills

## **LEADERSHIP**

**MakerSpace Founder**

Santa Tecla, El Salvador

- Started the first ever MakerSpace at my high-school to promote hands-on-learning.
- Installed Raspberry Pi's and Arduinos and taught students how to use them.

**Electronics Club Organizer**

Santa Tecla, El Salvador

- Organized and lead an electronics club intended to teach younger students about basic electronics, soldering and designing PCBs.

## **SKILLS**

Hardware: Mill, Lathe, Laser Cutter, 3D Printing

Software: SolidWorks, HSMworks (CAM), MATLAB, Basic ROS, Blender, Java, Arduino, Python, Office

Language: English (Fluent), Spanish (Fluent)

## **INTERESTS**

Electric Vehicles, Robotics, Designing and Building, Sailing, Soccer, Modelling and 3D Printing