

# Alec D. Aguilera

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## EDUCATION

### **University of San Diego**

BS/BA in Mechanical Engineering, Minor in Mathematics  
Overall GPA: 3.9

**San Diego, CA**

Expected Completion: May 2019

## RELEVANT COURSEWORK

Thermodynamics

Mechanics

Human Centered Design

Programming

Engineering Design

Multivariable Calculus

Electricity and Magnetism

Applied Mathematics

## PROJECTS

### **Design Project: Remote Controlled Vehicle**

- Programmed a remote controlled car to complete obstacle course using the Arduino Uno
- Fabricated the frame of the car using a laser cutter
- Optimized design for best time of completion, distribution of weight, and use of materials

### **Social Innovation Challenge: Self-Sustaining Composter**

- Ideated the design for a self-sustaining indoor compost unit
- Collaborated with team members to distribute tasks based on individual strengths
- Advanced to the Semi-Finals based on our social innovation
- Presented a 2 minute pitch on the accessibility and social impact to the Social Innovation Coaches

## SKILLS

- Experience with programming in C using Raspberry Pi 3 and Arduino Uno
- Experience with SolidWorks, AutoCAD, and Autodesk Revit
- Experience with 3D Printing and Laser Cutting
- Proficient in Microsoft Office programs: Word, Excel, PowerPoint
- Confident public speaker and presenter

## LEADERSHIP EXPERIENCE

**Foxfire Youth Leadership Training, Boy Scouts of America** - Idyllwild, CA      Summer 2014 - Summer 2016  
Black Hawk Crew Leader

- Planned and organized youth events during the week-long course for 40 participants
- Performed leadership presentations to faculty and participants on skills such as communication and problem solving
- Organized and evaluated the performance of youth faculty members
- Conducted faculty meetings of 35 members

## PROFESSIONAL EXPERIENCE

**University of San Diego Mathematics Department** - San Diego, CA

Fall 2016

Calculus Grader

- Graded and corrected homework assignments for two sections of Single-Variable Calculus
- Determined the mistakes in each students answers and redirected them to the correct answer

## AFFILIATIONS

- Boy Scouts of America: Eagle Scout
- Engineers Without Borders (EWB)

Fall 2013-Present

Fall 2015-Present