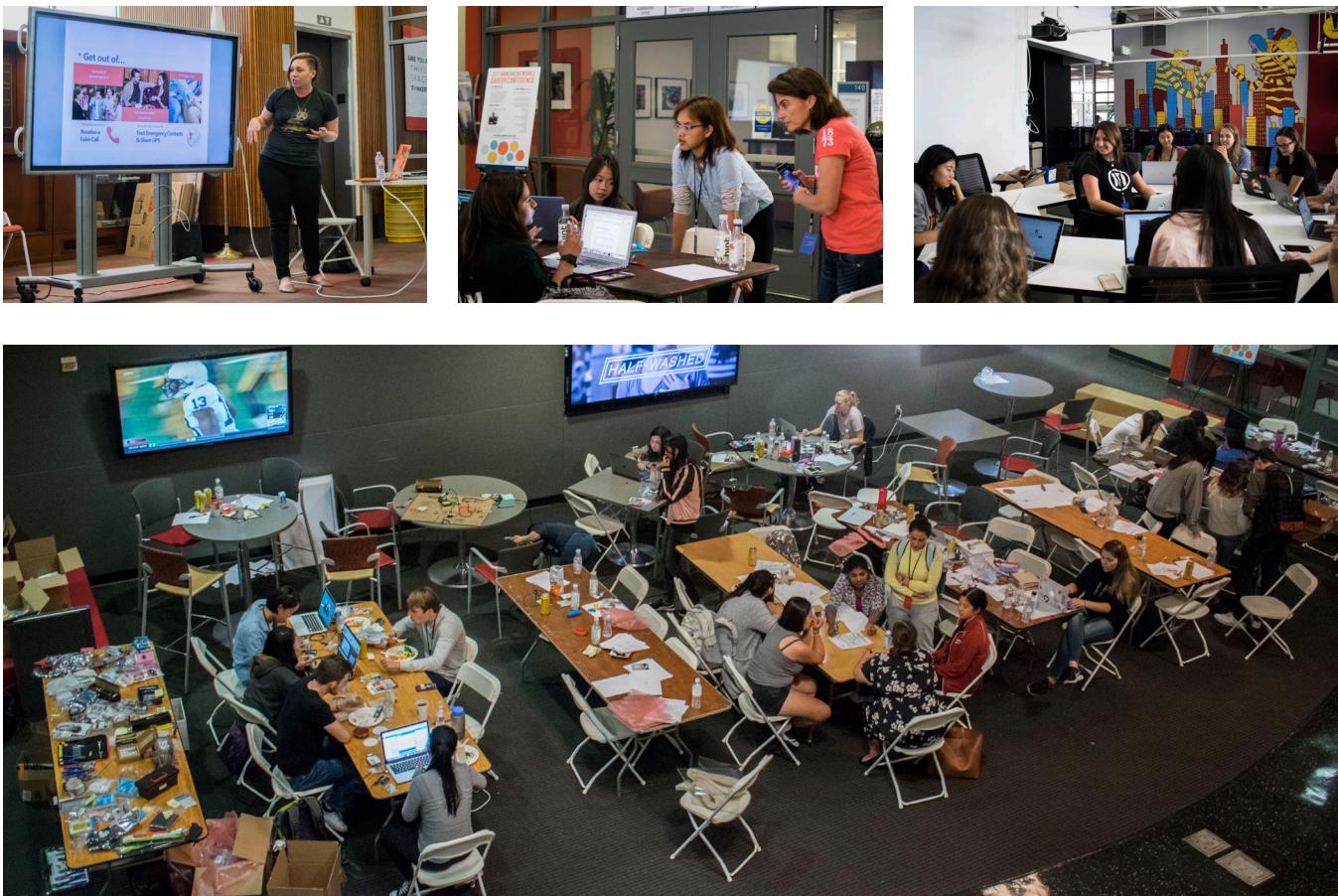


PRESENTED BY

SPARK SC



BREAK TO MAKE OVERVIEW

Inspired by MPowered's Makeathon at the University of Michigan, Break to Make is a two day, all-women makeathon created by Spark SC at the University of Southern California. Women in diverse fields such as engineering and design come to the event to learn new skills in electronics, prototyping, robotics, and pitching, hear from speakers in related industries, and build projects that are then presented to a panel of judges.

Break to Make was created to foster a supportive learning environment for women interested in maker culture and product design. For this first year of the makeathon, a dozen teams of four came together at the Annenberg School for Communication and Journalism and the Department of Aerospace and Mechanical Engineering lab in Biegler Hall to design a solution to a challenge in one of four categories: food, water and shelter, communications, education, and open design. Many teams came with little experience in making, and by the end of the weekend had learned how to 3D print their first project or use an IoT board.

PROJECT BRIEF



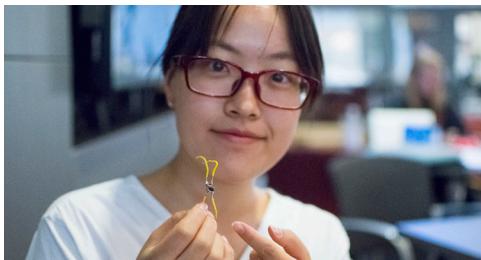
FOOD, WATER & SHELTER

This category addresses the basic needs of a person. How might we find new ways to deliver these basics to diverse communities and people?



EDUCATION

The foundation of our future lies in how we educate people. How might we reimagine the way we teach and learn for future generations?



COMMUNICATIONS

Technology and media are more present in our lives than ever before. How might we harness tech and media to work for and not against us?



OPEN CHALLENGE

Have a different idea in mind? Projects here should frame a real world problem in a HMW statement and address it through the design and prototyping of a physical solution.

JUDGING

Projects were evaluated by a panel of judges based on the quality of their product and their pitch. Our judges were Kate McAndrew, a senior associate at Bolt, Tracy Van Houten, test program lead for the Mars 2020 Rover at NASA Jet Propulsion Laboratory, and Valerie Frank, product manager at Inventables.



SCHEDULE



DAY ONE

Participants arrived at Annenberg bright and early, ready for a weekend of making. With full access to electronics & prototyping materials, as well as the Biegler lab, teams jumped into building their project. The day moved into workshops about 3D printing & microcontrollers, and was followed by a talk by USC professor Sheila Tejada. With the help of our mentors from companies like Oculus and Inventables, and volunteers from the lab, every team had an initial prototype by the end of the night.

DAY TWO

The following morning, our makers returned to wrap up their projects, starting final 3D prints, debugging code, or heading to the Biegler lab for some last minute woodworking. Kate from Bolt shared her tips on presentations, and helped teams workshop their pitches. The afternoon transitioned into the pitch competition, and each team was able to present their efforts from the weekend to a panel of judges. The weekend culminated with the winning teams receiving their prizes.

PROJECT HIGHLIGHTS

Project highlights are IoT smart tables, 3D printed disaster relief bands, smart deadbolts, sustainable living spaces rendered in Unity, and more. Prizes included \$250, Particle IoT boards, Pololu self-balancing robots, Makey Makey kits, and swag from sponsoring companies.

WINNERS



FIDGET DESK

A desk that generates energy and keeps students focused

Tamara Khasanova, Graphic Design '19

Rebecca (Becky) Byng, Design '19

Samantha Ko, Mechanical Engineering '19

Courtney Mercado, Chemical Engineering '18



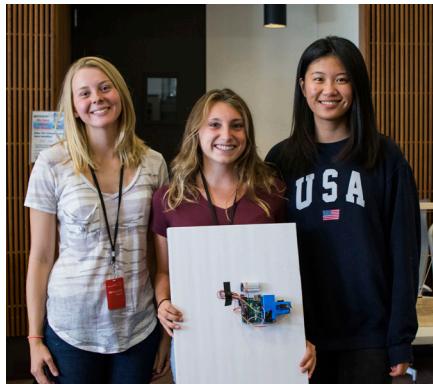
INTABLE

A smart desk that increases class participation

Ling Ye, Electrical Engineering '19

Ziru Ling, Philosophy, Politics and Law '19

Stephanie Ng, Iovine and Young Academy '21



BLUEKEY

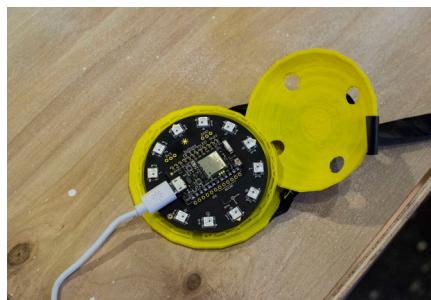
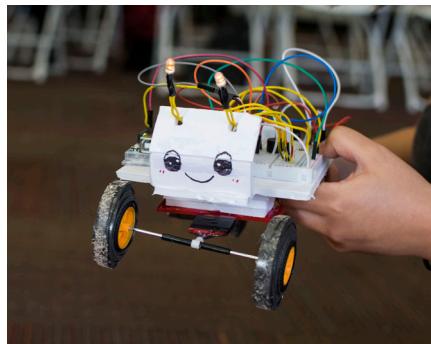
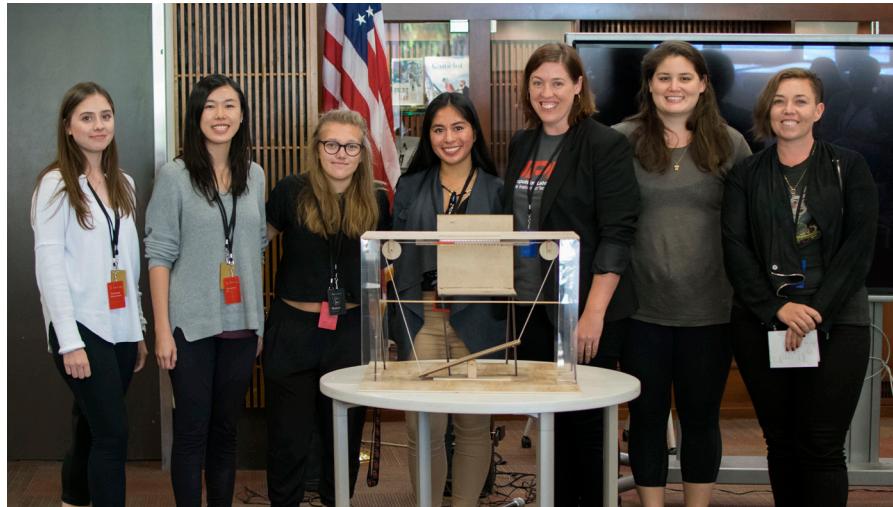
A smart lock that opens dorm rooms by the tap of a phone

Margaret Field, Mechanical Engineering '19

Amy Gaal, Mechanical Engineering '21

Shirley Huang, Iovine and Young Academy '21

Ashley Lyu, Biological Sciences '21



THANK YOU TO OUR PARTNERS



INVENTABLES™

