



CORNELL EWH
engineering world health



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2014 - 2015



ABOUT CORNELL EWH

Cornell University's Engineering World Health (EWH) chapter is a biomedical engineering-oriented project team with the goal of designing novel, low-cost technical solutions for improving health care in developing countries. EWH Cornell participates in the annual EWH Design Competition held each June and competes against chapters around the world. The EWH Design Competition tests students' innovative capabilities in identifying a health-related problem in developing countries and then creating a viable technical solution. The technologies developed have the potential to be implemented in the developing world and truly make an impact.

EWH Cornell is composed of a group of undergraduate students from diverse fields of study, including, but not limited to, Biological Engineering, Electrical and Computer Engineering, Mechanical Engineering, and Computer Science.



THE TEAM

Team Lead

Humale Khan '15

Subteam Leads:

Brecken Blackburn '16

Kevia Qu '16

Daniel Masetti '17

Business Lead:

Amy Wang '17



Members

Seniors '15

Benjamin Solaski

Srikanth Kowtha

Sophomores '17

Daniel Lee

Samir Durvasula

Justin Selig

Manish Patel

Michael Yang

Juniors '16

Fahmida Rashid

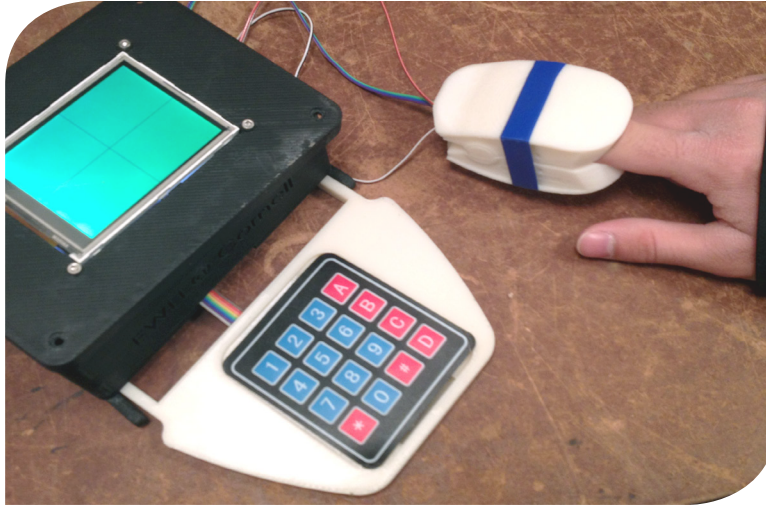
Julia Kelley

Peaky (Alex) Yuter

Freshmen '18



PAST PROJECTS



Low-Cost Vital Signs Monitor (2013 - 2014)

Whether a patient is in acute or long-term care at a hospital, a vital signs monitor is constantly in use, assessing the state of his or her health and alarming doctors if in case of emergency. Though common in every hospital across the US, vital signs monitors are hard to come by in undeveloped countries.

Current monitors on the market can cost thousands of dollars, a price clearly unaffordable by many hospitals in these regions. Our goal was to develop a portable, low-cost monitor which would sell for approximately \$100. It measured temperature, pulse oximetry, heart rate, and blood pressure. It also included an alarm system to immediately notify doctors should a vital sign fall above or below a healthy threshold.

This fully functioning monitor was designed by our Electrical and Computer Engineering sub-team.

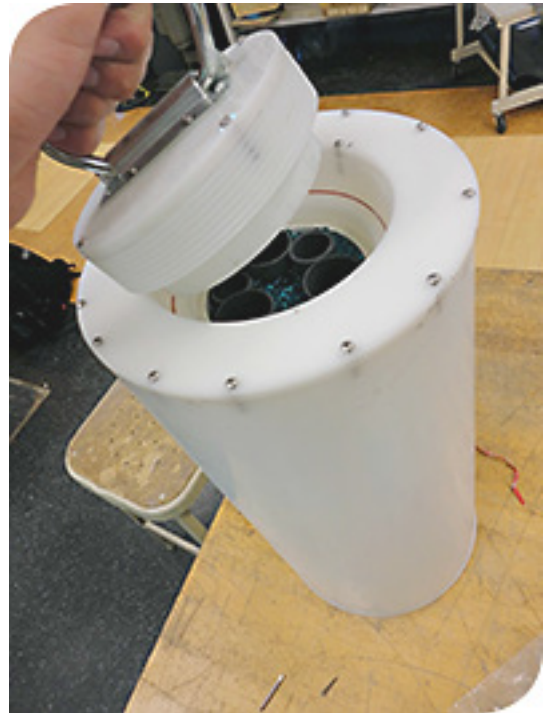
PAST PROJECTS

Passive Vaccine Refrigerator (2014)

It is estimated that more than a million children die annually from diseases that can easily be prevented by vaccination. Although millions of vaccines are donated to developing countries each year, about half of these are never administered due to temperature spoilage. Rural areas experience the worst difficulties with long-term vaccine refrigeration due to sparse and unreliable electricity.

Our prototype was designed to last around ten days. The system primarily relied on layers of insulation to prevent heat loss. Its design also minimized exposure to surrounding air when the fridge was opened.

This project was a collaborative effort among our Chemical Engineering and Mechanical Engineering majors.






2014 COMPETITION

This year, Cornell EWH competed in the annual Engineering World Health competition, placing third with our passively cooled vaccine refrigeration device. This was our first competition since the team's inception two years ago.

Our refrigeration project was selected out of many other potential ideas in the Spring 2014 school semester. With extensive teamwork and collaboration throughout the design and construction process, we were able to create a functional vaccine refrigeration device, which was then submitted to the competition.

As a younger team, we are incredibly proud of the contributions of each of our team members and of our success. We look forward to an even brighter future.



SPONSORSHIP

Without the help of our generous sponsors, Cornell EWH would not be as successful as it is today.

Thank you.

Help us make a difference in the world!

Donations of any form (money, equipment, materials, and services) will ensure the continued growth of our young project team and help us to achieve our utmost potential.

For more information about Cornell EWH and our progress, please visit us at our website:

<http://rso.cornell.edu/ewh/index.php>

Or email us directly through:

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