

CORNELL CUP ROBOTICS

Information Packet 2018

ABOUT US

Cornell Cup Robotics is a student run project team at Cornell University that designs, manufactures, and creates innovative robotic-themed projects. Over 50 Cornell students with different engineering backgrounds work together to create dynamic projects that bolster the ingenuity of embedded technologies. Since 2010, our projects have been showcased at many conferences and we have received support from numerous robotics and technology companies. The objective of Cornell Cup Robotics is to provide a valuable and practical experience for students interested in robotics and embedded systems, and to demonstrate the extraordinary technology that we are able to create.

Over the past few years, Cornell Cup Robotics has received significant recognition. We have been highlighted in the White House Fact Sheet of Making in 2015 and 2016 and been featured at events such as the Intel Embedded Research & Education Summit in 2014 and the National Maker Faire. Additionally, our team has presented at Walt Disney World and the NASA Kennedy Space Center. Cornell Cup Robotics has collaborated with many high-tech companies over the years including: Autodesk, BatterySpace, Intel, Mathworks, Maxon Motors, Moogm, NASA, Pololu, Solidworks, and Tektronix.



30,000
hours of work
done each year

60
student team
members

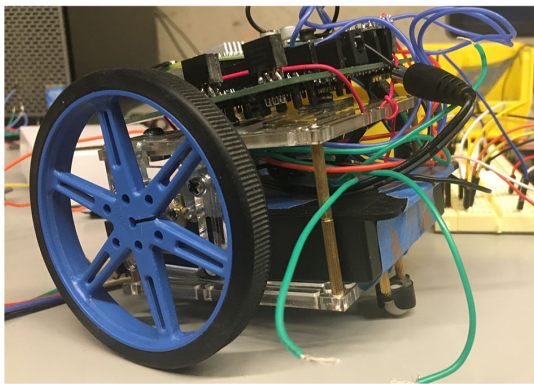
6
undergraduate
and graduate
engineering
majors

3
large-scale team
projects

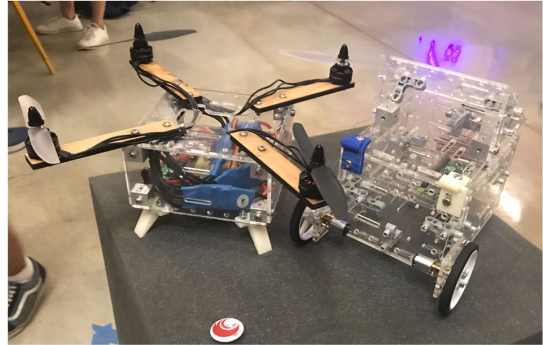
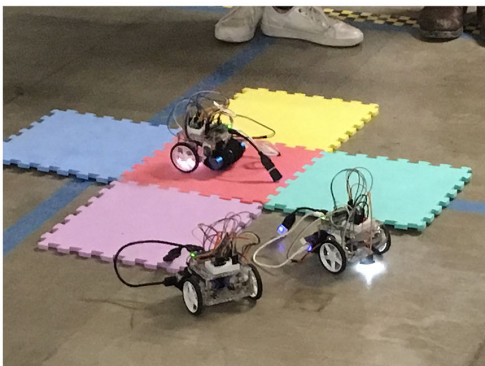
1
faculty advisor
Dr. David
Schneider

TEAM HISTORY

The Cornell Cup Robotics project team has been a part of the Cornell Engineering community since 2010. Over the years, the team has successfully created practical learning experiences for students interested in robotics, embedded systems, and computer science.



Another initiative that Cornell Cup Robotics did was Project Palooza, our effort to allow visitors to engage with the work that we do. Project Palooza comprised of many smaller projects, each focused on engaging our visitors. we can demonstrate in our lab space. From Project Palooza, several whole team projects were created.



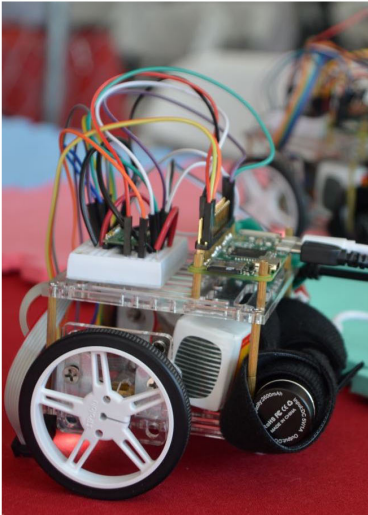
Cornell Cup Robotics has created numerous robotic-themed projects. These projects range from a humanoid robot that is able to play RockBand with 98% accuracy, to an autonomous omni-directional rover named DuneBot, and even functional droids inspired by R2D2 and C3PO. Many of the projects make use of the modular robotics platform ModBot.



In years past, the team supported the Intel-Cornel Cup, an internationally reowned embeded systems competition. Beginning this year, Cornell Cup Robotics will be hosting the ARM-Cornell Cup in addition to working on our three main projects detailed on the next page.

OUR PROJECTS

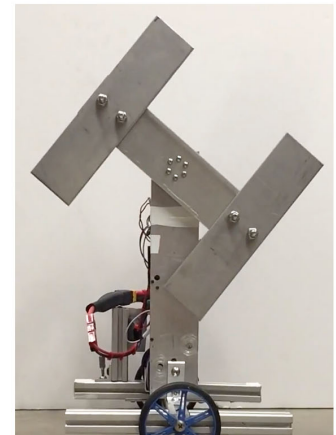
MINIBOT



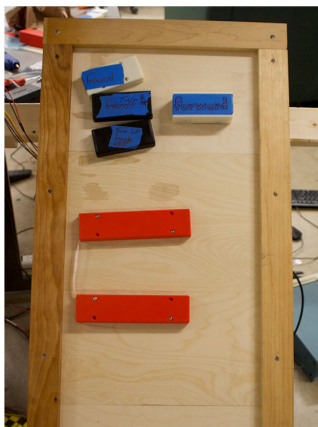
The MiniBot project aims to create a cost effective and intuitive learning platform for undergraduate and high school students to learn about robotics. Our robots will be modular and easy to assemble so students can create anything from line followers and sumo bots to race cars and swarm bots. The base will be compatible with both Vex and Lego pieces and will include custom electronics and modular assembly pieces. The kit will include thorough documentation to allow students to manufacture their own pieces to integrate into the system. Additionally, there will be a simple coding platform where student can quickly upload commands and code to the robot. Our goal is to make this robot cheaper than the existing robotics kits and more modular to allow creativity to soar!

POGO

The Pogo robot is a bouncing robot that is created around the mechanics of a reaction wheel. This reaction wheel allows it to shift its orientation in mid air, and allows us to keep it upright and control which direction to go towards. We decided on this project because it proposed interesting problems in all of the Mechanical, Electrical, Software, and Systems Engineering fields and requires a good deal of interdisciplinary work that we promote at Cornell Cup. For this semester, we aim to create a 2D version of Pogo that leans on an inclined wall, so that it can only bounce in a plane. Moving forwards, we look to create a full 3D version that can follow you around the lab.



WALL



The Interactive Wall is designed to teach young students how to code. It uses physical blocks with code snippets that are then translated into physical movements of a robot. Players can start with basic maze games and advance to challenging levels with moving opponents, using their coding concepts and logic. The Wall can control both the 2D system and the MiniBot. The team is also working on 4D features that can enhance this fun but also educational experience.

COME JOIN US

Cornell Cup Robotics relies on collaboration with companies in order to create new and innovative projects each year. We could not have achieved our success without the supports of our sponsors.

BENEFITS OF COLLABORATING

- Tax Deductible Contribution
- Increased exposure on Cornell's campus through team events, like expos and recruiting, that are held annually. Sponsors are also welcome to view our team's resume book and contact our active team members throughout the year.
- Sponsors are prominently displayed at conferences and worldwide events that the team attends each year alongside our new projects. They will also be featured on our website and promotional material.



CONTACT US

Team:
Cornell Cup Robotics
Cornell University
272 Rhodes Hal
Ithaca NY, 14853

Faculty Advisor:
Dr. David Schneider
Cornell University
612 Rhodes Hall
Ithaca NY, 14853

For more information, please visit our website: <http://cornellcuprobotics.com/>

SPONSORSHIP LEVELS

Donations can be monetary, software, or hardware.

Platinum (over \$5,000)

- Company logo on tri-annual newsletter sent to alumni, staff and students
- Company name on '18 t-shirt and competition uniform
- Company name, logo and website link on the team website
- Company name on '18 competition paper, poster, brochure and sponsorship packet
- Company name prominently displayed at student recruiting events and expo events

Gold (\$2,500 to \$5,000)

- Company logo on competition projects
- Company name on '18 t-shirt
- Company name, logo and website link on the team website
- Company name on '18 competition paper, poster and brochure
- Company name displayed at student recruiting events and expo events

Silver (\$1,000 to \$2,500)

- Company name on '18 competition uniform
- Company name, logo and website link on the team website
- Company name on '18 competition paper, poster and brochure
- Company name prominently displayed at student recruiting events and expo events

Bronze (Up to \$1,000)

- Company name, logo and website link on the team website
- Company name on '18 competition paper, poster and brochure
- Recognition in next newsletter and alumni mailings
- Company name prominently displayed at student recruiting events and expo events