

UNIVERSITY *of* WASHINGTON  
ELECTRICAL AND COMPUTER ENGINEERING

# ARUW SPONSORSHIP PACKAGE

---

2021-2022



**BE BOUNDLESS**

---

## WHO WE ARE

The Advanced Robotics at the University of Washington, or ARUW, is a team of more than 70 students building eight robots to compete in an international robotics competition called RoboMaster. Our members are primarily engineering and business students, all passionate about competitive robotics.

In 2015, ARUW became the first North American team to compete in RoboMaster. Since then, we have inspired dozens of other North American teams to join, making RoboMaster one of the largest global university robotics competitions. In that time, ARUW has more than tripled in size and seen great improvement in key areas, including project management, software architecture, financial management, and team organization.

Although we are fully student led, we often consult with professors and industry professionals for technical guidance. In our six years of competing, we have received a multitude of awards for robot performance, aesthetic design, outstanding leadership, and open-sourcing high-quality designs and documentation. We are currently the North American RoboMaster University League Champions.

## WHAT WE DO

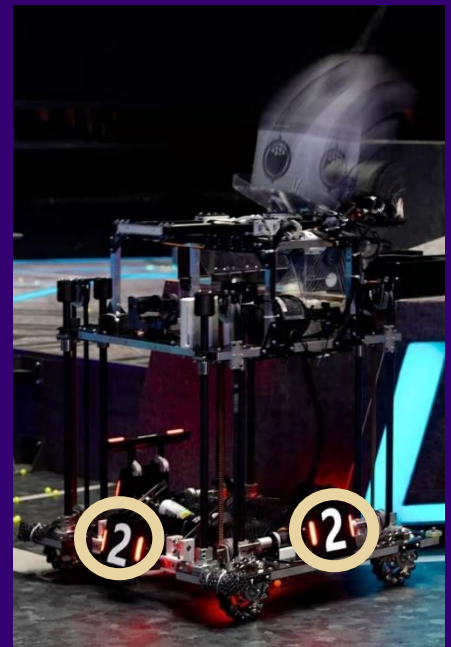
Almost 400 universities around the world are involved in RoboMaster each year. Each university builds eight robots to play a paintball-like game on a field 28 meters long and 15 meters wide (about the size of a basketball court).

Each team of robots launches 17mm diameter and 42mm diameter projectiles at the other team's robots. Pressure-sensitive plates (see right) mounted to the exterior of each robot can detect when they are struck with projectiles and reduce the robot's "health". When robots reach zero health, they lose power and are eliminated from the game.

Seven of the robots are controlled remotely using mice and keyboards with first person view cameras streaming live feeds back to the pilot booth. One robot is fully autonomous, traveling along a rail and choosing its own targets. RoboMaster is a huge and theatrical competition, with events taking place in sports stadiums for live audiences and millions of online viewers.

UNIVERSITY of WASHINGTON

ELECTRICAL AND COMPUTER ENGINEERING



## OUR MEMBERS

ARUW exists not just to win awards at competition. Our primary goal is to help students grow as engineers, businesspeople, and managers. Our members take the lead on a diverse array of projects, developing a unique set of skills that will allow them to thrive in industry.

## RECRUIT TALENTED ENGINEERS

### Meet with team members

Through involvement on the team, our members have established a track record of hard work and dedication. Within four years, all of our members will be looking for work. Sponsoring ARUW is an opportunity to make a good impression on the top robotics engineers coming out of the University of Washington.

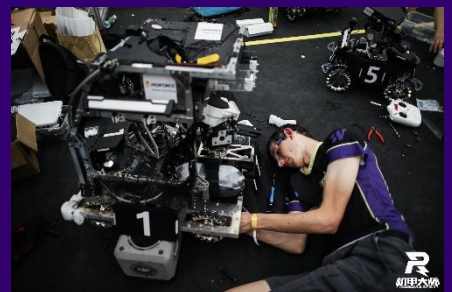
### Resume book

Sponsors gain access to our team's resume book. With members graduating every year, sponsoring ARUW can help you fill positions in your organization.

### What our members offer

Your interests vary, so we have detailed below some of the most important topics our members learn from their work on the team.

- > **Robotic control systems:** Members use control theory concepts to write software (in modern C++) transforming user input into quick and accurate robot response.
- > **Embedded systems:** At the heart of each robot is an ARM based microcontroller. Students leverage existing open-source work and additional custom libraries to maintain an open-source hardware abstraction layer that other teams utilize.
- > **Electrical engineering:** Students design custom PCBs (in Altium). Our members work with power electronics and embedded systems, including a capacitor bank with a wide input range 20A boost converter and a custom implementation of an embedded MCU.
- > **Computer vision:** Our team trains a machine learning model (in Python) to locate other team's robots in real time. This information is fed into sophisticated ballistics calculations to predict where, when, and if we should launch the next projectile.



- > **Mechanical engineering:** Designing and manufacturing eight robots in one year is no easy task. Each season, members use SolidWorks to create complete 3D models of all our robots with manufacturability and cost in mind.
- > **Manufacturing:** ARUW builds most of our components in-house. Students gain experience with traditional and additive manufacturing. More exotic techniques are also used, including 3D printing fiber reinforced polymers.
- > **Business and administration:** Students gain experience in finance, working closely with engineers, marketing, and outreach.
- > **Engineering/project management:** Members of our leadership team work to fulfill big-picture organizational goals, make hiring decisions, manage our budget, and ensure that resources are always being committed to the highest priority projects.

## BRAND RECOGNITION

### Logo display

- > Sponsor logos will be proudly displayed on our robots, our website, and on competition jerseys. With competitions streamed to millions of viewers each year, this is a great way for your brand to gain exposure on an international stage.
- > ARUW also has considerable local influence. At UW's annual Engineering Discovery Days event, we reach over 10,000 people from the greater Seattle area.

### Product familiarity

Our members will soon join the workforce and carry with them a preference for products that they are familiar with. Providing your product to ARUW now will build a lasting preference with engineers who will soon be influencing decisions about where to purchase those products in high volume.

## HELP SUPPORT EDUCATION

ARUW provides tremendous educational value to over 70 members across a wide variety of majors. Your contribution to the team helps provide students with a high-quality education rooted in hands-on learning.



---

# SPONSORSHIP LEVELS

We understand that the interests of our sponsors vary, so we are more than willing to modify the levels below to suit your needs. Please reach out to use if you have any questions.

## Purple (\$5k+)

- > Exclusive meeting with team members

## Gold (\$2k+)

- > Access to our resume book
- > Company logo on competition jerseys
- > Company logo on multiple robots

## Silver (\$500+)

- > Company logo on one robot

## Standard

- > Company logo on website
- > Social media exposure

# CONTACT US

---

aruw.org  
robomstr@uw.edu

Check us out on social media! (logos are clickable)



GitLab

GitHub YouTube



We do not get any cash funding from our school and rely entirely on corporate and private donations. Without your generosity, we would not be able to work on such exciting projects.

Thank you!