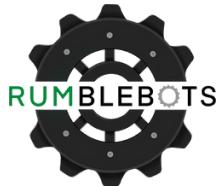




RUMBLEBOTS SPONSORSHIP PROPOSAL

2023-2024



Contact

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Message to the Sponsor

Greetings from the RUMblebots undergrad team project from the University of Puerto Rico at Mayaguez. This letter aims to ask for your support in helping RUMblebots become one of the most recognized robotics projects at UPRM. We seek future sponsors that believe in our vision as much as we do. The team needs financial aid for tools, electrical components, raw materials, and team member travel to continue manufacturing championship-level robots.

RUMblebots is an engineering project under the College Robotics of Manufacturing Engineers (CROME) association in the Mechanical Engineering department at the University of Puerto Rico, Mayagüez Campus. Our project involves designing, manufacturing, testing, and optimizing combat robots. This past year, we competed for the first time in four years in the NHRL May 2023 Event with our 12-pound robot Arsenal, which placed in the top 10 robots of its class. This was a great milestone for the team, which motivates us to keep on striving for success.

Our team is divided into four departments: Design and Manufacturing, Electronics, Software, and Marketing & Logistics. While building the robots, our members develop leadership skills, teamwork, networking, communication, time management, and project management. They learn to work under pressure to fix engineering problems as quickly as possible.

The team uses tools and techniques to provide members with an experience that will be invaluable for their future careers. Members are trained in using tools such as computer-aided design (CAD), finite element analysis, electronic circuit design, PCB design, automation, GD&T, and are skilled in manufacturing heavy machinery. We strive to hold engineering precision and documentation excellence to the highest standards expected in the industry.

RUMblebots is currently seeking funding for its next set of robots and to cover competition travel expenses. We are in the process of optimizing Arsenal, our 12-pound robot, designing and constructing an omnidirectional 30-pound robot, and a 500-g autonomous Sumo-bot. Additionally, we have two 3-pound robots that we plan to have compete during the 2024 Spring semester. To this end, we require raw materials, as well as electronic components, to continue developing these projects. Moreover, we are currently moving into a new workshop area that still requires some adjustments and investments for its full functionality.

Your company's contribution will play a crucial part in the success of our team's goals. We invite you to become part of this project and share our team's success representing the UPRM and Puerto Rico during future national and international competitions.

Sincerely,



David Añeses Vera
Team Captain



Keyshla Betancourt Delgado
Team Co-Captain

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About Us

RUMblebots is currently the only combat robotics project at the University of Puerto Rico, Mayagüez Campus. We design, manufacture, test, and optimize combat robots with the aim to compete at national and international competitions.

Our team is mainly composed of undergraduate students from Mechanical Engineering, Electrical Engineering, Computer Science, Computer Engineering, Industrial Engineering, and Business. However, we welcome members from any department of the University that have demonstrated interest and motivation in the project. Together, our team works toward every aspect of robot development, from brainstorming and design to manufacturing, optimization, fundraising, and team member recruitment.

The team was founded in 2004 by Jesús Sánchez Vázquez, who served as the inaugural RUMblebots Captain. During that very year, the team made its debut at the BattleBots IQ tournaments with a middleweight robot named Alakran, which clinched the championship title. Alakran continued to impress by securing the runner-up position in 2005 and achieving third place in 2007. These early years of the project remain a source of immense pride, marked by numerous victories and significant milestones that laid the foundation for the team's growth.

In May 2023, our team made a triumphant return to competition after a four-year hiatus, participating in the National Havoc Robot League (NHRL) May Event. We take pride in the performance of our 12-pound robot, Arsenal, during this competition. This achievement has reignited our motivation to further develop our projects for upcoming competitions.



Vision

To excel at representing the University of Puerto Rico, Mayagüez Campus at competitions and events, while leading the combat robotics field with innovation and inspiring the future of engineering in Puerto Rico.



Mission

To complete the development of combat robots while enabling its members to learn and apply engineering knowledge and concepts in a real, hands-on manner.

About The Competitions

What is combat robotics?

Combat robotics is a competitive event where participants design and build remote-controlled robots to battle against each other in specialized arenas. These robots are equipped with weapons and mechanisms to disable opponents. There are different weight classes, and each round lasts three minutes. If there is no KO at the end of the established time, a panel of judges deliberates for a winner. After a battle, teams head to a repair area to fix any damage taken during the fight.

Where do we compete?

We currently compete in the National Havoc Robotics League (NHRL), which has 3 categories: 3lb, 12lb, and 30 lb. We recently competed in the May 2023 Event in the 12lb class, with our robot Arsenal. Our goal this year is to compete again during the upcoming Spring 2024 Semester with an optimized version of Arsenal, as well as debut our 3lb robots: Wasous-Kill and Midas.



May 2023 Event Highlights

Six of our members traveled to Norwalk, CT in order to compete.

We were the only team from Puerto Rico participating in the event.

Arsenal placed within the top 10 robots in the 12lb class.

We were able to make an assessment of the competition in order to optimized and further develop our future bots.

Our Team

We have an amazing group of undergraduate students that work hard toward the success of our team. Our project's Department Composition is as follows:

Design & Manufacturing



The Design & Manufacturing Department oversees the initial sketching, design, manufacturing, and assembly of our robots. Additionally, this department is responsible for selecting materials and conducting structural analyses on both the weapon and the robot's body.

21 members

Software



The Software Department mainly oversees the mini-sumo project, an autonomous bi-directional robot with microcontrollers and sensors. This department also takes care of the development and maintenance of the team's website.

7 members

Electronics



The Electronics Department is responsible for the research, circuit design, assembly, testing and documentation of the electrical components for all robots.

5 members

Marketing & Logistics



The Marketing & Logistics Department plays a vital role in managing project finances, securing funds, and planning for our various project needs. This department is also in charge of advertising and organizing essential fundraisers and team-building activities.

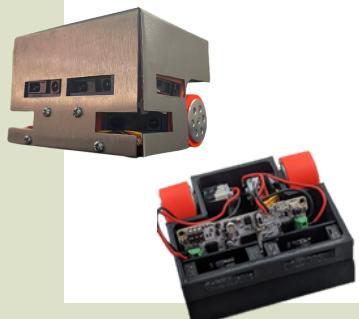
6 members

Meet Our Bots



ARSENAL - HOBBYWEIGHT BOT (12 LB.)

Arsenal is a 12lb battlebot with a modular weapon designed to be easily interchangeable and a universal chassis focused on its ease of replacement. Arsenal's chassis is composed of a mix of 3D-printed carbon fiber and nylon composites to make it lighter and distribute the weight to other areas while keeping its structural integrity.

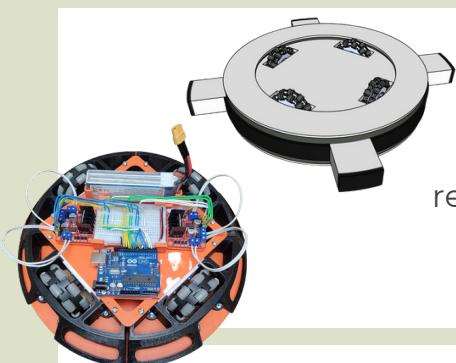
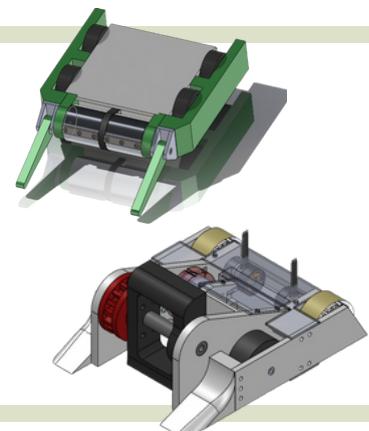


MINI SUMO BOTS (500 G.)

The Mini Sumos project involves creating small autonomous combat robots, limited to 10cm by 10cm and 500 grams. It aims to promote interdisciplinary teamwork, covering mechanical design, electronics, and software development; including sensor integration, motor calibration, and code debugging.

WASOUS-KILL AND MIDAS (3 LB.)

The 3-pound robot project is formed by two groups of less experienced team members who are each developing a 3lb robot to compete against the other team's robot in a match. This project serves as an in-team training course for inexperienced undergrad students who will learn the basics of robotics, manufacturing and design.



OMNIDIRECTIONAL ROBOT (30 LB.)

The 30-pound "Omnidirectional Robot" features a circular design with both an omnidirectional drive and a rotating, retractable weapon system. This innovation lets the pilot attack opponents from any angle, leveraging the robot's agile movement without revealing its intended path.

"LA CHERRY" TRAINING BOT (15-30 LB.)

Our practice training bot is specifically designed to receive all hits taken from our official robots. This practice robot took inspiration from previous robot designs and has an extra plate for protection to better dampen all strikes from other robots.





Cost Estimates

Total Annual Expenses **\$21,675.00**

Administrative & General Expenses

Team Polo Shirts (new members) \$450.00

Team T-shirts (all members) \$400.00

Team Building Activities \$340.00

CNC Table and Enclosure \$1,900.00

NHRL Competition Expenses

Travel, Housing & Transportation \$8,800.00

Robot & Tools Shipping \$300.00

Registration (3 Robots) \$75.00

Arsenal (12lb.)

Raw materials \$350.00

Electronic components \$600.00



Cost Estimates

Mini Sumo (500g)

Electronic components	\$150.00
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Midas & Wasous Kill (3lb.)

Raw materials	\$800.00
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Electronic components	\$1,200.00
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Omnidirectional Robot (30lb.)

Raw materials	\$3,950.00
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Electronic components	\$1,800.00
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“La Cherry” Training Bot (15-30lb.)

Raw materials	\$230.00
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Tools	\$330.00
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Sponsorship Benefits

At RUMblebots, our passion lies in developing combat robots and providing hands-on engineering experiences to our members. We invite you to join us on this exciting journey as a sponsor.

By sponsoring RUMblebots, you:

Nurture Future Leaders

Support the development of tomorrow's robotics and engineering leaders. Our members develop a wide range of technical and soft skills through their experiences at RUMblebots, which will help them thrive as professionals in the field.

Fueling Competitive Excellence

By supporting our team, you enable us to access the resources required to maintain our competitiveness on both national and international stages.

Engage the Community & Boost Brand Visibility

Sponsors benefit from positive community exposure and a reputation for supporting education and technological advancement; as we engage with the local community through outreach activities coordinated through the UPRM.

Expand Your Network

Sponsoring RUMblebots opens doors to a network of like-minded professionals, academics, and students in STEM fields.



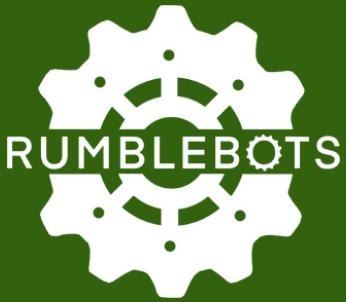
How to Sponsor Us

There are many ways to contribute to our team. We are open to “in-kind” donations such as raw material and manufacturing tools. Additionally, we appreciate donation of products we can sell or raffle during fundraising events. The most direct way to support our team is through monetary donations.

In recognition of your generous support, we offer various promotional opportunities for your company when you sponsor our team. These benefits vary depending on the donation amount, as follows:

Category	Bronze (<\$499)	Silver (\$500-\$1,499)	Gold (\$1,500-\$2,999)	Platinum (\$3,000+)
Website	✓	✓	✓	✓
Social Media	✓	✓	✓	✓
Team T-shirts	Written	Small logo	Medium logo	Large logo
Competing Robots		✓	✓	✓
Workshop			✓	✓

Donations to the team are coordinated through our team email, **rumblebots.crome@gmail.com**, and through our team captains. Monetary donations can be made via direct deposit or checks, please contact us in order to supply the corresponding information. We look forward to having you as one of our Sponsors!



**Thank you! We look
forward to having
you as one of our
Sponsors!**

Contact

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