



SIMON FRASER UNIVERSITY

ASCENSION ROBOTICS



2026 SPONSORSHIP PACKAGE

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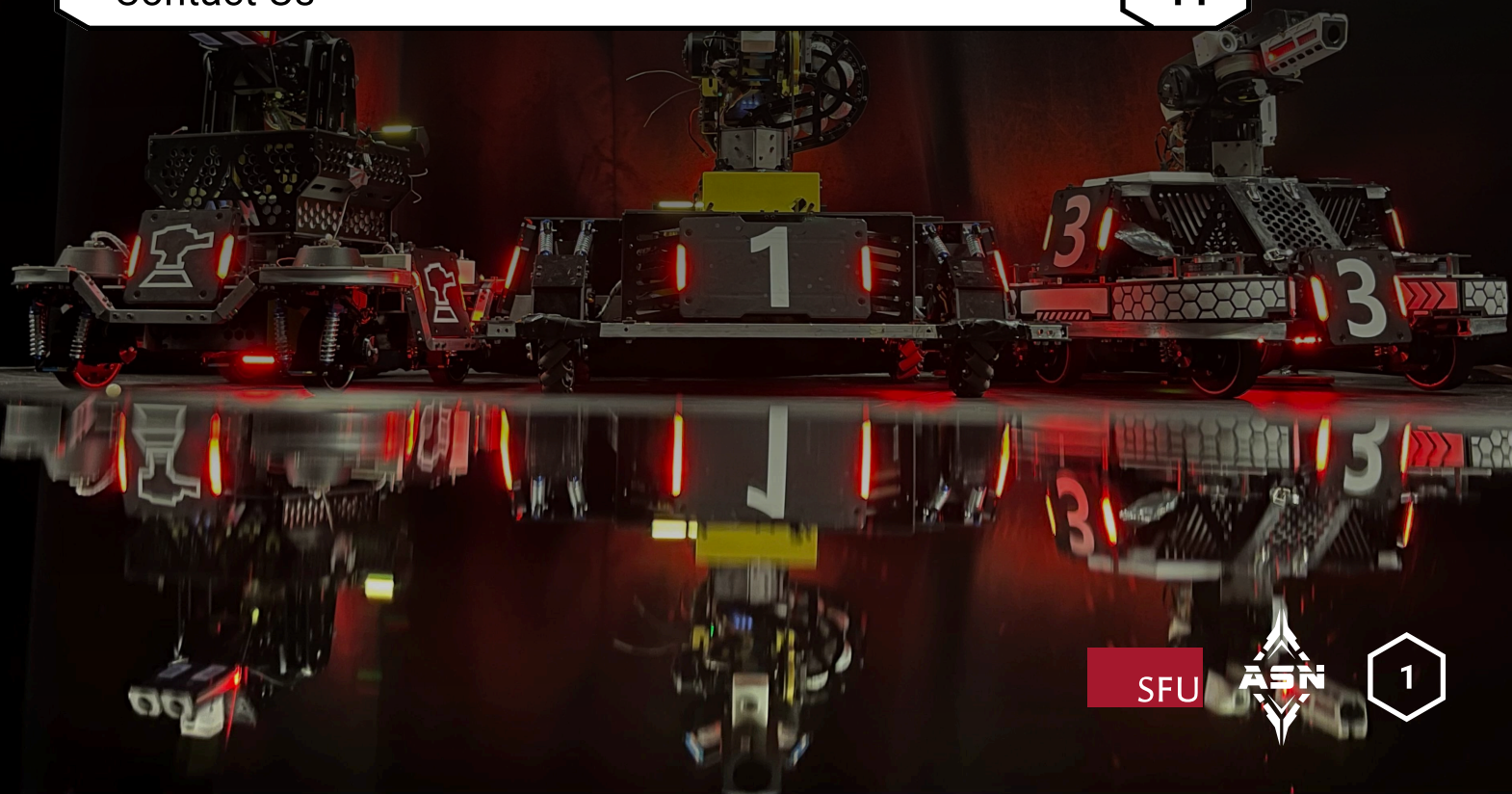
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ABOUT OUR TEAM

Our Mission:

To develop the next generation of robotics engineers by designing, building and coding advanced robots for one of the most technically-demanding engineering competitions.

Ascension Robotics is a student design team affiliated with Simon Fraser University that has been participating in the ARC Robotics Competition for 3 years. Our team consists of 30 members pursuing degrees in mechatronics, computer science, business, and more.

After placing **4th** and **5th** in the 1v1 and 3v3 categories respectively in Colorado's 2025 RMNA competition, our team aims to compete in and win ARC 2026 at Purdue while continuing to develop 7 robots for the 2027 Robomaster University Championship in Shenzhen.

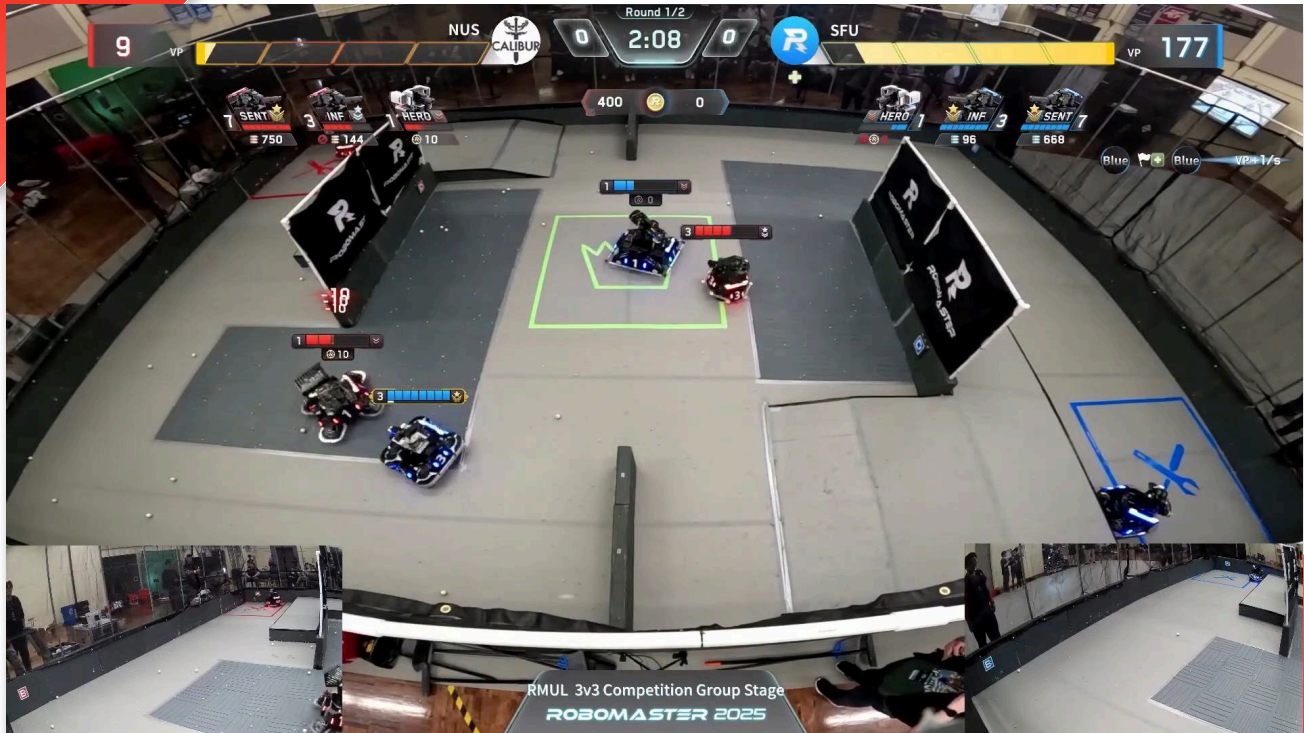
"Ascension Robotics started with 6 students who had an extreme passion for robotics. In the 2 short years we've been active, I'm happy to see more have joined our ranks & achieved enormous amounts of skill growth. From the very start, we've taken pride in our engineering quality & design originality, and intend to continue doing so in the future. I believe our backbone of accountability & originality will continue to lead our path of technological progress, and I look forward to seeing what we can achieve in the upcoming season!"

- Edison Wang, Team Lead



OUR COMPETITION: ARC ROBOTICS

Advanced Robotics Competition, or ARC (formerly Robomaster North America (RMNA)) is an international collegiate robotics competition where universities around the world compete to build a diverse fleet of robots. ARC gamifies engineering, software development, and project management.



Competition footage of one of our 3v3 matches against the National University of Singapore (NUS) at RMNA 2025 in San Diego.

ARC offers several competition categories including 1v1 and 3v3. The main 3v3 competition consists of fast-paced robot-on-robot ranged combat, where teams attempt to capture a central objective while taking down enemy bots. There is also the Engineer Challenge in which custom robots with multi-axis arms are designed to manipulate game elements. Finally, the ARCTIC technical conference is designed to encourage high-quality open-sourcing of robot developments. Our team intends to participate in every event category.

Each year, a select number of teams are offered a spot to compete in the RoboMaster University Championship (RMUC), the international 7v7 category. We aim to compete in RMUC in 2027.

TEAM HISTORY & FUTURE

2023: Ascension Robotics is founded from a shared passion for innovation, hands-on learning, and accessibility to robotics.

2024: (RMNA @ Boulder, Colorado): (9th out of 19 in 3v3, 9th out of 24 in 1v1)
We made RMNA history as the first team to debut with 3 functional robots. We pushed until the very last minute to incorporate a computer vision model into our sentry robot, securing two top 10 finishes

2025: (RMNA @ San Diego, California): (5th out of 20 in 3v3, 4th out of 24 in 1v1)
Last year, we experimented with more complex mechanical systems, implementing a caster-swerve drive train on our infantry and sentry bots. With boosted maneuverability and speed, we also refined our control systems to achieve two top 5 finishes.



2026: (ARC @ West Lafayette, Indiana):

Jan: *Systems Fair:*

Our team will be showcasing our work at SFU Surrey's Biggest Tech Career Fair, representing our team to the school body and local community

Apr: *Final Assessment:*

We must demonstrate functional robot prototypes at this point, and submit videos for assessment by ARC officials.

May: *Robot Reveal:*

After some final touches, we plan to hold a celebratory event for both teams and sponsors, showcasing our completed robots

Jun: *Competition Day:*

We plan to compete in the Engineer Challenge for the first time and re-enter the 1v1 and 3v3 competitions as veteran teams. With our systems now battle-tested and proven, we are poised to challenge for victories.

2027: (RMUC @ Shenzhen, China): (7v7)

Our ultimate goal is to compete in the international 7v7 university championship hosted by DJI in Shenzhen, China, representing Canada on the world stage. As preparation for this event, we are designing and prototyping all 7 robots in 2026.

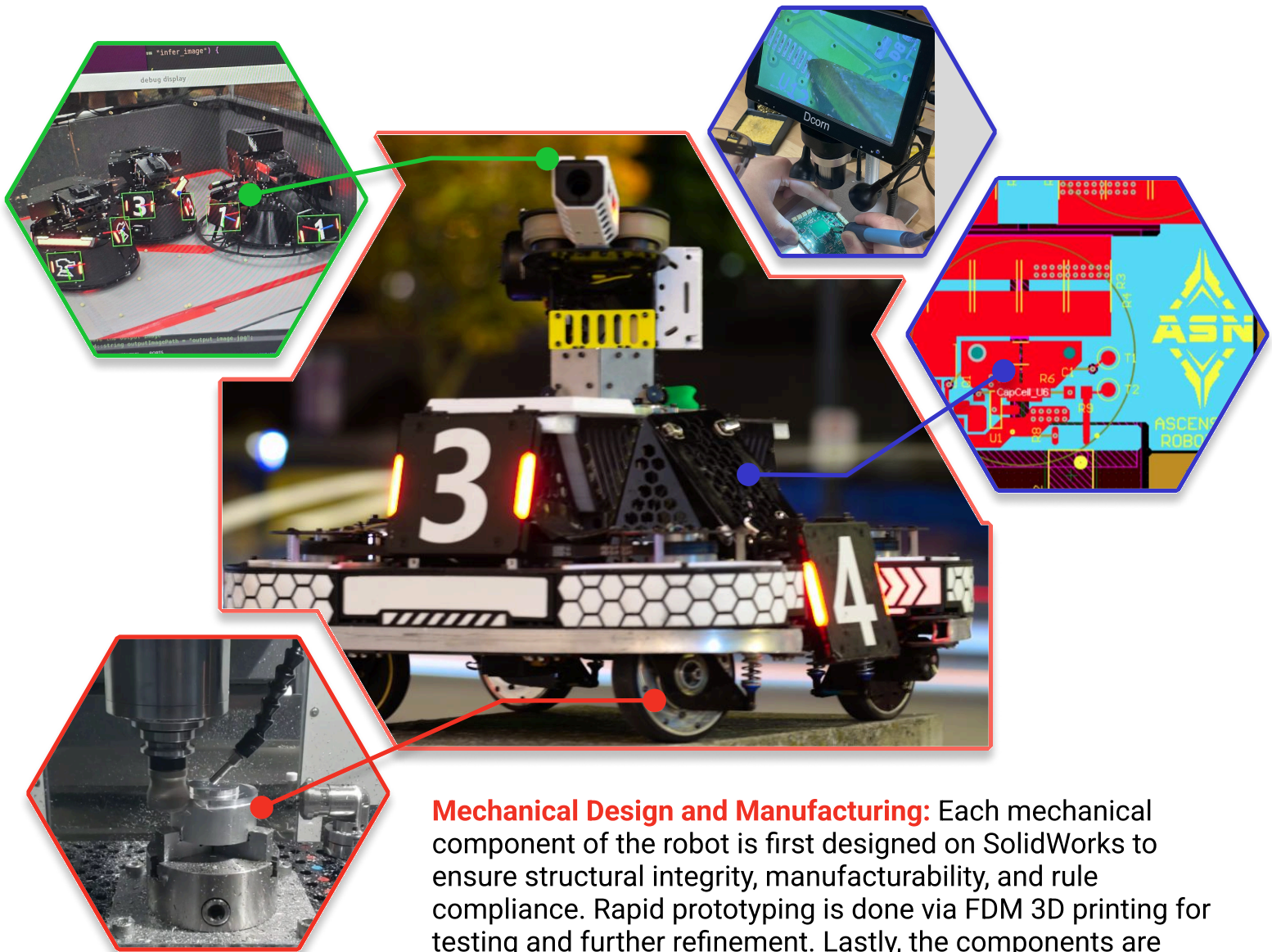
WHAT WE DO

Computer Vision and Autonomous Navigation:

Our computer vision systems are deployed on an NVIDIA Orin Nano running a custom-trained YOLO machine learning model. This model enables real-time target detection and prediction for aim assist on our robots. Additionally, our fully autonomous Sentry robot uses LiDAR and simultaneous localization and mapping (SLAM) to navigate the battlefield.

Embedded Programming & PCB Design:

Every robot is equipped with STM microcontroller development boards to send & receive data from motor controllers, sensors, and the high-level processing platform (NVIDIA Jetson). Each board's firmware is custom-written & tuned. Some robots carry supercapacitor arrays & a bus regulator to optimize use of the limited chassis power.



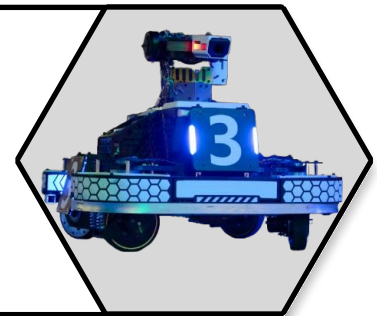
Mechanical Design and Manufacturing: Each mechanical component of the robot is first designed on SolidWorks to ensure structural integrity, manufacturability, and rule compliance. Rapid prototyping is done via FDM 3D printing for testing and further refinement. Lastly, the components are CNC-machined or waterjet from aluminum, fibreglass, and carbon fibre.

OUR ROBOTS: ARC 2026

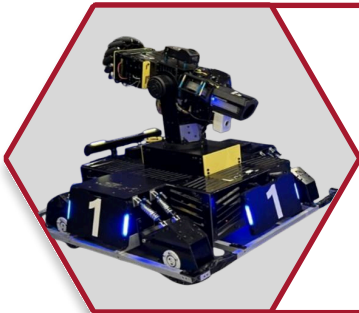
Our Core Team: Hardened by Competition

These are the robots in high-velocity development for our competition in June 2026. After several seasons of experience designing these robots, they are polished, robust, and ready for battle.

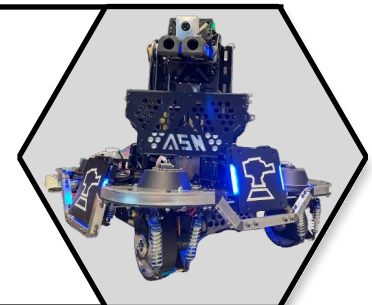
Infantry: The Infantry-class robot is the foundational robot for both the 1v1 and 3v3 competition categories. It features a 4-wheel swerve drive allowing it to move at maximum speed in any direction while firing 17mm pellets up to speeds of 90 km/h.



Hero: The Hero bot is the team's heavy hitter. This robot is the largest on the battlefield and fires 42mm golf balls, screw-fed from our magazine. Despite its large size, its mechatronics-driven system allows it to remain agile on the field.



Sentry: Unlike the other robots, the Sentry is completely autonomous. It integrates LiDAR and computer vision to perceive its environment, fire on targets, and autonomously navigate the battlefield. With a dual-barrel turret, it is not to be taken lightly.

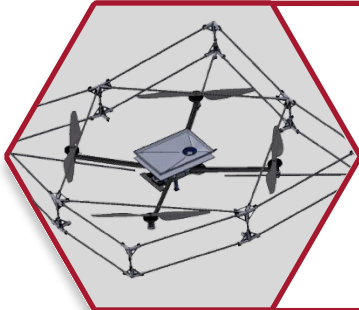
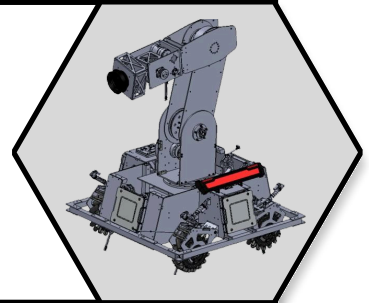


OUR ROBOTS: RMUC 2027

Our New Robots: Ambitious and Experimental

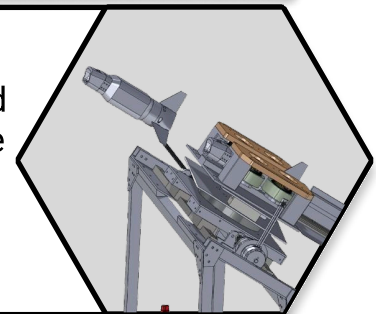
These robots are being developed for our 2027 season, and are necessary to compete in the 7v7 category. These new archetype have challenged our team to think creatively and evolve our design process.

Engineer: The Engineer is a specialized support unit that manipulates field elements to secure strategic resources and provide buffs to our team. To do so, it uses a custom multi-axis robotic arm and controller to coordinate its actuators.



Drone: The Drone is a large quadcopter that flies above the battlefield, supporting the team through aerial reconnaissance and suppressive fire. Our drone's lightweight carbon-fibre frame offers extended flight times while protecting the rotors from projectiles and impacts.

Dart: The Dart System launches high-velocity darts to strike enemy structures, delivering significant damage and temporarily disabling enemy bots. The launcher can rotate horizontally for aiming and adjust launch power with flywheel speed. In addition, mid-air steering is being developed using rudders, elevators, and onboard vision.

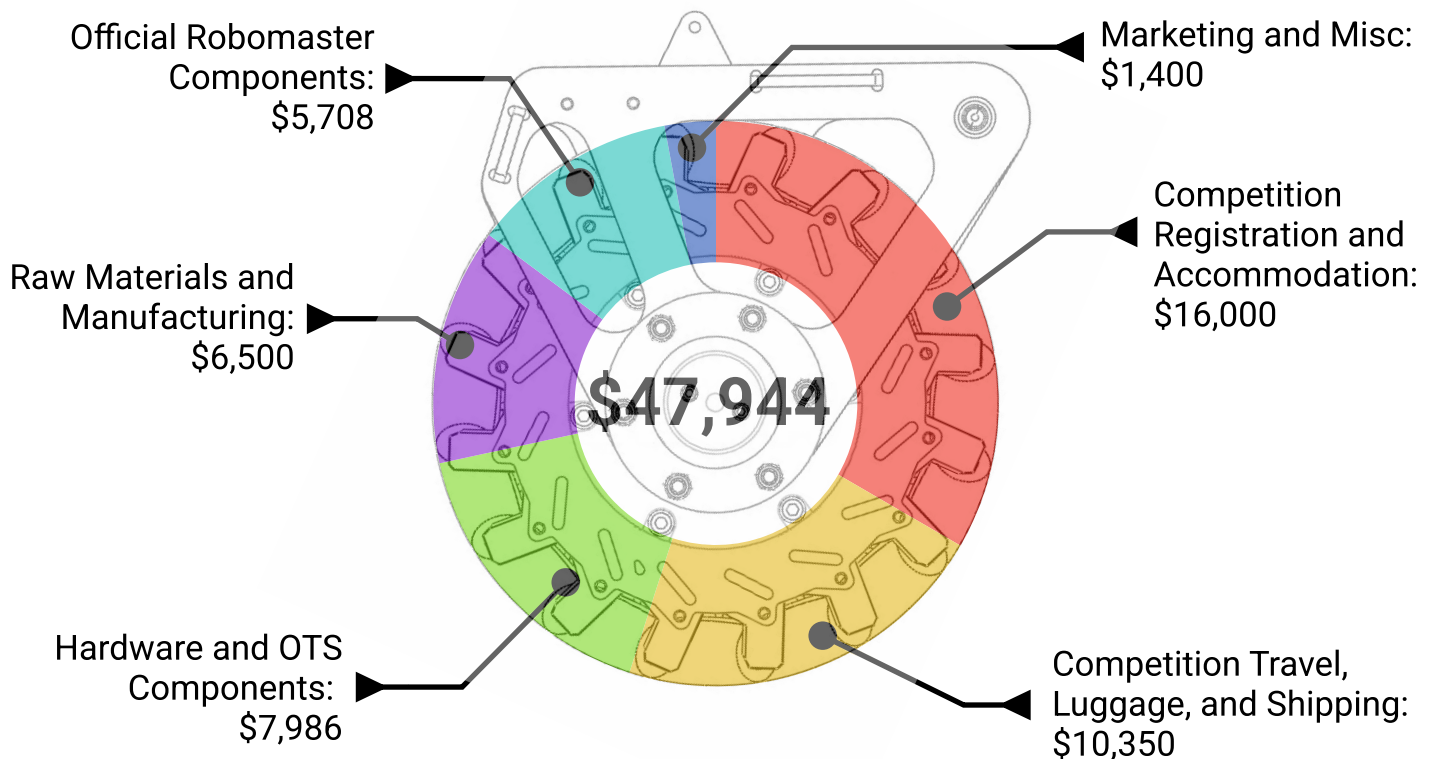


Radar: The Radar is the team's strategic sensor hub that is able to provide full battlefield surveillance. Using YOLO and ResNet vision models, it detects opposing robots and maps their coordinates. It also intercepts enemy signals and neutralize the opposing team's drones.

WHY SPONSOR US?

Our team relies on sponsors to compete at the highest level. Material costs and shipping expenses accumulate, as we need to purchase carbon fibre, NVIDIA development kits, and LiDAR units, in addition to the costs of shipping robots to and from our competitions. To continue providing our team members with tools to succeed, we need your support.

Season Cost Breakdown:



As a sponsor, you will receive direct communication with a team of driven and dedicated engineers. Supporting our team builds students' technical skills, preparing them to become top industry graduates through the challenging ARC Competition.

Your brand will be displayed at both local university and official robotics events, and shown on our social media platforms and team website.

SPONSORSHIP TIERS

All packages outlined are priced in Canadian dollars. We would be happy to discuss any additional requests you may have, such as feature videos, specific recruitment events, or marketing campaigns. **In-kind sponsorships are also welcome.**

How to give: Please use our SFU Advancement donation page (donate.sfu.ca/page/149582/donate/1). Any monetary donations made through this page are eligible for a tax receipt.

Diamond: \$5,000+

- Receive all Gold Tier perks
- Be featured as title sponsor on team apparel*
- Have the option to request a robot demonstration for event appearances**

**Limited to 1-2 companies.*

***Transport costs not included.*

Gold: \$2,000

- Receive all Silver Tier perks
- Be provided a space for a custom text/logo on our robots
- Have your company's promotional products handed out during our showcase events

Silver: \$1,000

- Receive all Bronze Tier perks
- Be invited to our robot reveal event, a celebration of our season progress which includes a networking session
- Have your logo featured on our team apparel

Bronze: \$500

- Receive a shoutout on social media as our sponsor
- Have your logo and company blurb featured on our website

OUR SPONSORS

Thank you to our sponsors for making all our work possible.



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CONTACT US

If you have any questions or concerns, or if you are interested in sponsoring us, please do not hesitate to contact us!

Email ✉ sfurc@sfu.ca

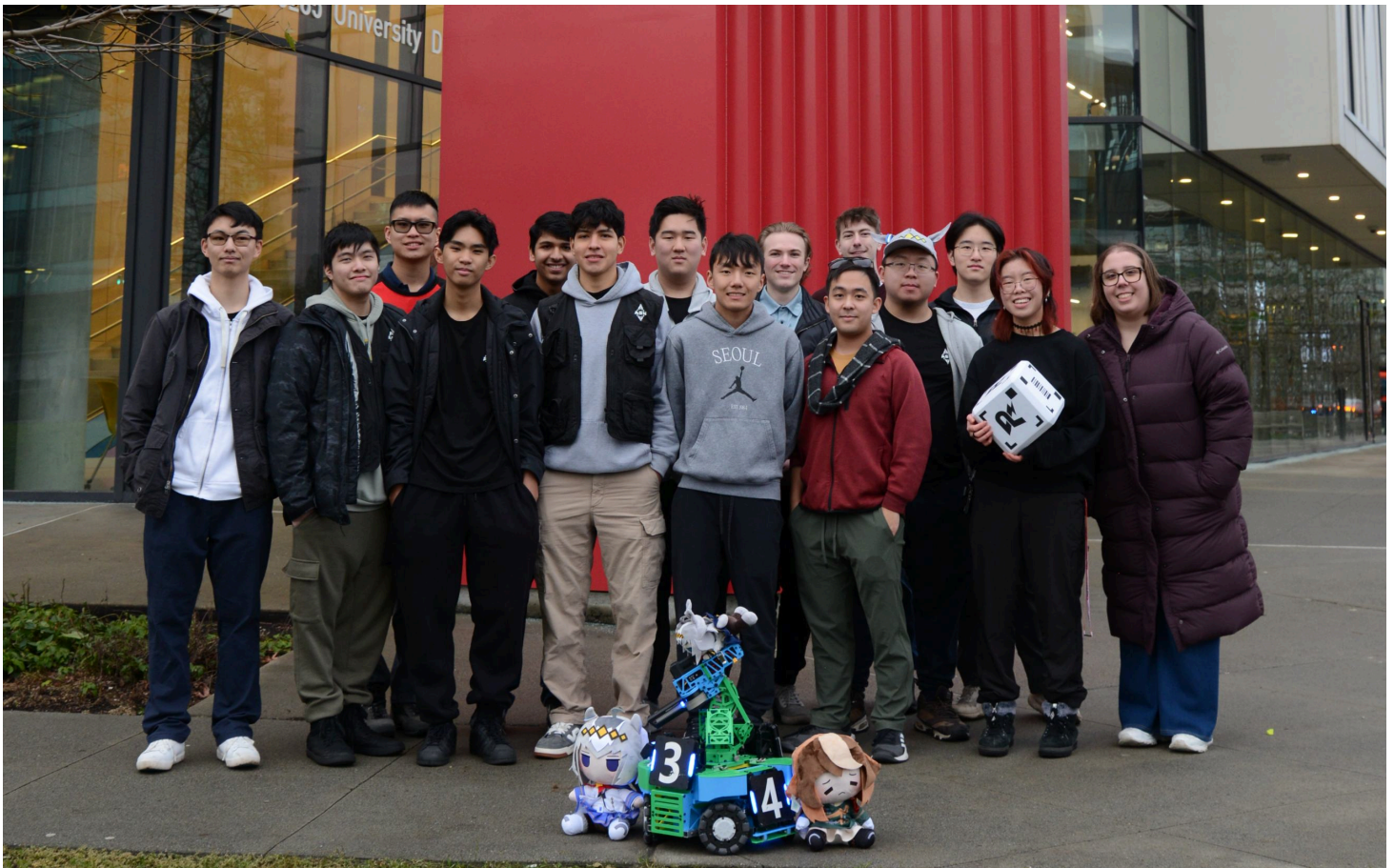
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