



WINTER QUARTER NEWSLETTER



TRITON ROBOTICS



Our Goals This Quarter

With the upcoming RoboMaster University League competition here at UCSD, our team is hard to finish CAD models, programming, and wiring the robots. Our team is working to finalize the logistics for teams who will be competing. We have also finalized the date of the competition for June 21-29th this year!



What We've Accomplished With Your Support

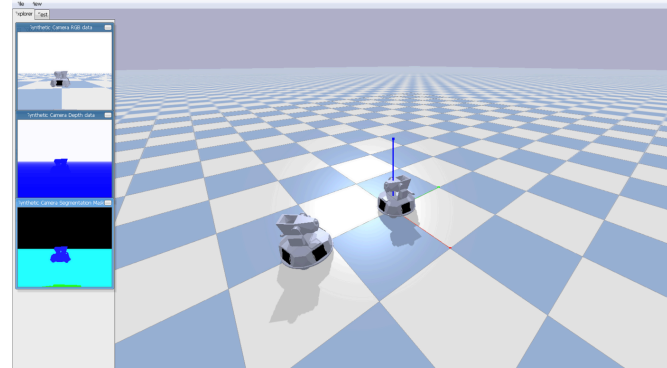
With your support, Triton Robotics has been able to push boundaries and explore new horizons this quarter. Your contributions have empowered us to try innovative approaches in our projects, refine our skills, and tackle challenges with creativity and determination. From experimenting with new design techniques to optimizing our robot's performance, we've grown as a team and made significant strides. Thank you for enabling us to dream big and make it happen! Triton Robotics extends our gratitude for the generous support we've received from your company.

OUR GOALS NEXT QUARTER

Next quarter, Triton Robotics is focused on continuing our spirit of innovation as we enter the critical testing phase for our robots. This phase is crucial as we prepare for our upcoming RoboMaster North America competition, where we'll put our robots to the ultimate test. With teamwork and dedication, we aim to enhance our capabilities and represent Triton Robotics with excellence.

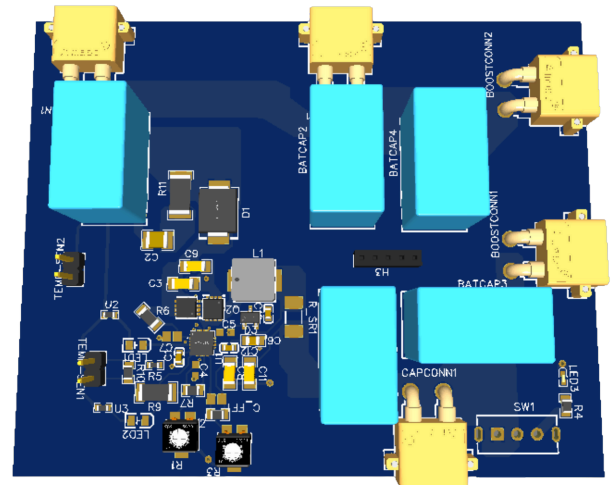
Autonomy Team

The autonomy team has been developing an advanced aim-to-center program to enhance our shooting mechanism's precision. Previously, aiming at moving robots presented significant challenges. However, with our innovative software and advanced sensors, we can now accurately target other robots—even while they're spinning!



Electronics Team

The electronics team has been working on a super capacitor to enhance our robot's performance. This component is important because the RobotMaster rules limit the amount of power our robots can draw, restricting dynamic gameplay. With the addition of the supercapacitor, we can overcome this limitation by temporarily storing energy and accessing additional power as needed. This enables us to quickly adapt our attack or defense strategies, potentially turning the tide of competition in our favor.



Mechanical Team

Our team is making significant strides in optimizing all three of our robots for competition. Hero is undergoing a chassis redesign to reduce its size and improve agility, addressing past challenges with mobility on the field. To enhance the power of Hero's turret, we are exploring a new pulley ratio design. By adjusting the ratio from 1:2 to 1:1, we aim to improve the turret's efficiency and overall performance. For Sentry, the focus has been on ease of assembly, with a new indexer design that breaks into smaller, easily joinable components. This improvement allows for quick repairs using just two Allen keys, a crucial advantage after experiencing difficulties with breakdowns in previous competitions. Lastly, Infantry is progressing through suspension testing, precision metalwork in the machine shop, and integration of lightweight carbon fiber components to enhance performance.

