

# ASTA/Team Inspiration Community and Outreach Activities

Emma Chan

Team Inspiration's motto is *To Learn, To Share, To Innovate, and To Inspire*. As such, Team Inspiration participates in various outreach programs to educate the next generation about robotics. Throughout the year, Team Inspiration has spread knowledge of RoboNation's competitions and learning outcomes through both local and global outreaches. In addition to previous years' outreach activities, we added the Girls Inc.'s Eureka Summer Program and the Blue Tech Maritime Museum outreach.

In April, our team showcased our autonomous boats of RobotX and RoboBoat, autonomous underwater vehicle (AUV) of RoboSub, and Porpoise Robotics' MiniSub at the San Diego SeaPerch Competition (Fig. 1), drawing over 150 students and parents. During the judging break, we let SeaPerch students learn and interact with our robots and explore what is possible beyond SeaPerch. This is our 3rd year of supporting the San Diego SeaPerch Competition.



Fig. 1. Team Inspiration outreach at the San Diego SeaPerch competition in 2025.

During the summer, our team conducted more intensive workshops in partnership with the Girls Inc.'s Eureka Summer Program at University of California, San Diego (UCSD) (Fig. 2), UrbanLife Ministries (Fig. 3), Manna's Martial Arts, and University of San Diego (USD) STEAM Youth and Community Conference for the underrepresented and underprivileged students. We taught the students how to build either a SeaPerch or a LEGO robot incorporating various sensors, and how to program the robot to complete various tasks.



Fig. 2. Team Inspiration outreach at Girls Inc.'s Eureka Summer Program



Fig. 3. Team Inspiration outreach at UrbanLife Ministries' Summer Camp

At the Miramar Air Show (Fig. 4) last September, we presented our AUV to over 5,000 people.



Fig 4. Team Inspiration outreach at the Miramar Air Show, showcasing our AUV

Additionally, Team Inspiration went to the Blue Tech Maritime Museum Outreach to present our robots (Fig. 5). We operated our AUV and boat (RoboBoat) in the San Diego Harbor, attracting many visitors and robotic enthusiasts.



Fig 5. Team Inspiration outreach at the Blue Tech Maritime Museum, presenting our boat (RoboBoat) and AUV

Advancing Science, Technology, and Art (ASTA), the main sponsor of Team Inspiration, has partnered with San Diego Mesa College through the Mesa Impactship (internship) program to provide the college students with opportunities to learn robotics by participating with Team Inspiration in competitions such as RoboBoat, RoboSub, and RobotX (Fig. 6). These competitions allow students to gain hands-on experience in the mechanical, electrical, and software subsystems of their choice as well as organizational and leadership skills, preparing them for future internship and full-time employment. By concurrently enrolling in a work experience course, student interns are empowered to work with purpose and guided by SMART (specific, measurable, achievable, realistic, and time-bound) goals. With this approach, we have successfully recruited seven active team members who are developing professional skills in mechanical, electrical, and software engineering and contributing to impactful outcomes, preparing them for real-world employment. In addition, the Impactship program (with the support of ASTA) has also enabled students interested in other domains of autonomous vehicles to establish a Full Self-Driving (FSD) Club within Mesa College.



Fig. 6. San Diego Mesa Impactship program

The goal of the FSD Club (Fig. 7) is to develop a fully autonomous racing Go-Kart to compete in the Autonomous Karting Series (AKS) in May 2026. The FSD Club was also established to address the lack of engineering and robotics presence in San Diego community colleges. This aims to give students mechanical, electrical, and software skills for students to use towards applications such as transferring to a University of California (UC) or a California State University (CSU), or towards work experience such as internships and jobs.



Fig. 7. Mesa College FSD Club

Team Inspiration played a key role in turning the Mesa College FSD Club from a new idea into a structured, competition-ready robotics team. Leveraging decades of experience in autonomous robotics and systems engineering, Team Inspiration provided mentorship on technical architecture,

development timelines, and subsystem integration, helping the club adopt professional engineering practices from the start. Team Inspiration's guidance in organization, planning, and documentation established a sustainable team structure while exposing students to industry-relevant mechanical, electrical, and software workflows. As a result, Team Inspiration significantly strengthened the club's ability to prepare community college students for AKS competition, UC/CSU transfer pathways, and engineering internships or careers.

Our RoboBoat team also draws talents from participants of other competitions. Two of our RoboBoat team members started with FIRST Tech Challenge (FTC), a middle and high school ground robotics competition, where they learnt the basics of teamwork, robotics, and problem-solving. From there, they progressed to more complex challenges, like RoboBoat, and gained experience in fully autonomous navigation.

In addition to local outreaches, our team extends its knowledge to the global community. Actively coaching teams in Benin, Ecuador, Eswatini, Haiti, Paraguay, and Togo, our team connects with coaches from abroad and works to create a transformative robotics experience for students (Fig. 8). Team Eswatini aims to compete in future RoboBoat competitions.

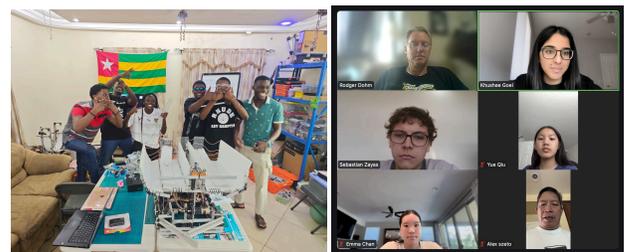


Fig 8. Togo team members with their robot (left) and Team Inspiration meeting with Paraguay team members (right)

From these outreaches, we are able to share our experience with students in the local and global communities. The experience reinforced our learning and gained internship opportunities with local maritime companies, as well as additional sponsors.