ROBOSUB 2025

AMADOR VALLEY HIGH SCHOOL
Amador Valley Robotics (AVBotz)

Community & Outreach Description

Over the past year, our club has participated in two major outreach events that allowed us to share our passion for underwater robotics with students of all ages.

Our first major outreach initiative was at our school's annual ACE Code Day, a student-organized STEM event that brings together over 90 high school students from across the district. At this event, our team led a hands on session introducing participants to the principles of electrical engineering and how they apply to our RoboSub, Marlin V2. We presented a technical walkthrough of Marlin's custom circuitry, sensor systems, and control mechanisms, providing insight into real-world engineering challenges and how we tackle them. Our lecture included live demonstrations, simplified schematics, and Q&A segments to ensure the material was accessible yet informative. Many students expressed interest in joining the club or pursuing engineering fields after the session, and we were thrilled to inspire the next generation of technical thinkers.

Our second outreach event focused on younger students and took place at Donlon Elementary School during their Engineering Night. This event gave us the opportunity to interact with elementary-aged children and their families in a more interactive and playful way. We brought Marlin to the event and set up engaging hands-on stations where students could explore the basics of underwater robotics. We explained how our submersible robot uses sensors to "see" underwater, how we program autonomous behaviors, and how the mechanical parts all work together to achieve complex tasks. The students were especially fascinated by seeing Marlin up close, asking enthusiastic questions and sharing their own imaginative ideas. For many of these students, this was their first time being exposed to advanced robotics, and we were excited to spark their curiosity at such a young age.

By doing these events, we hope to make robotics fun and easy to understand for everyone, whether it's teens thinking about a future in technology, or kids just starting to explore. We love showing others what we've built and hope it sparks more interest in underwater robotics.