



FIRST ROBOTICS MILILANI HIGH SCHOOL TROBOBOTS



MEET THE TROBOBOTS!

Hello! We, FIRST Team 2853, the TroboBots, are located at Mililani High School, Mililani, Hawaii. Our team was first founded by Mr. Tong in 2009 and is now advised by Mr. Tyson Kikugawa, an alumni of both Mililani High School and FIRST Robotics Team 831. We work earnestly as a team to grow and learn how to improve ourselves to be better each year.

As part of the international FIRST organization, our mission as a team reflects the honorable ideals of FIRST. The vision of FIRST as described by founder Dean Kamen is "to transform our culture by creating a world where science and technology are celebrated and where young people dream of becoming science and technology leaders." Hand-in-hand with this, our mission is to better prepare our students for the workplace through a real world, hands-on, project-based environment. We strive to accomplish our mission through engaging in programs that build science, engineering and technology skills, inspire innovation, and foster well-rounded life capabilities. We engage with our community by providing opportunities to enhance their Science,

Technology, Engineering, and Math (STEM) experiences and show that STEM is accessible to all ages and experience levels.

Every year we participate in both the FTC or FIRST Tech Challenge and the FRC or FIRST Robotics Competition. In FTC robots are much smaller than the ones in FRC, and are able to be built with modular parts. It is primarily used as training for new members and to develop leadership in veteran students. The six-week build season for FRC starts in January and ends in February. During the build season, we come up with designs to fulfill the season's game requirements and objectives. Hours upon hours are spent in Mr. Kikugawa's class after school and during weekends designing, testing and building the robot.

Through competitions like these as well as various community-based events and services, we hope to spread the ideals of FIRST and the practices of STEM in a positive light. This year, we will continue in our goal to help others to expand their knowledge and to inspire Mililani's next generation to pursue the promising fields of STEM.

INTRO TO THE 2015 FRC GAME



"RECYCLE RUSH is a recycling-themed game played by two Alliances of three robots each. Robots score points by stacking totes on scoring platforms, capping those stacks with recycling containers, and properly disposing of pool noodles, representing litter. In keeping with the recycling theme of the game, all game pieces used are reusable or recyclable by teams in their home locations or by FIRST at the end of the season." For more information, mililanirobotics.org/2015game

On January 3, 2015, students, mentors, and advisors of our team met at Mililani High School at 4am to carpool to the 2015 FRC Kickoff at McKinley High School. At Kickoff, we learned that this year's game is Recycle Rush. Prior to the build season our team had been training for game rules understanding and analysis with multiple past games. Our team worked in three groups to thoroughly study and present important aspects of the game rules. Following Kickoff, we met in one of our sponsor's, Airgas, conference rooms prepared to read, dissect, and discuss the game manual. Team members were split into groups to read and visually organize the game rules. Over the next few days the groups each presented and discussed infographics explaining their understanding of the rules. Countless hours were spent over the following two days strategizing and brainstorming until finally, on the fifth of January, the final decision was made to build a tote bot with a hook pickup mechanism. After finalizing design ideas, testing for different mechanisms of the robot within each subteam began. Testing ranged from tote lifting to gearbox design to multiple camera coding. The team now has a functional practice bot and is currently working on building this year's competition bot!



You can find more details about our build season on our blog: mililanirobotics.org/blog

UPCOMING EVENTS

- **Open House**
Friday, February 13
7pm-8pm
C106
- **Bag 'n Tag Day**
Tuesday, February 17
11:59pm
- **MHS Carnival**
February, 20-22
5pm-11pm
11am-11pm
11am-6pm
Mililani High School
- **Hawaii FRC Regional Competition**
Thursday, March 26
through Saturday,
March 28
Stan Sheriff Center

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