MVRT

Sponsor Packet

Monta Vista High School
Cupertino, CA

Overview of MVRT

Founded in 1997, the Monta Vista Robotics Team was established by a few friends looking for a way to venture into the technological world through our creative innovation. Over the last 23 years, our team has grown from its humble beginnings in a physics classroom into a team with a lasting impact on its community and students. Today, we have over 100 members, with projects and partnerships connecting us to people in our community and around the world. Some of our team goals include promoting the sharing of knowledge, skills, and experience; respecting the opinions and ideas of others; building a friendly and professional environment for all our members; and promoting the vision of FIRST in the community. Dedicated to fostering a passion in science and technology within our community, the Monta Vista Robotics Team inspires students and develops interpersonal skills through team-based engineering challenges.

What is the FIRST Robotics Competition (FRC)

Founded in 1989, FIRST (For Inspiration and Recognition in Science and Technology) prides itself on its leadership in the scientific arena and its commitment to building a strong foundation for the country's future workforce. One of FIRST's main goals is promoting scientific innovation through the annual FIRST Robotics Competition (FRC), designed to immerse high school students in real-life engineering in the spirit of "Gracious Professionalism" to others. Each year FIRST develops the competition by supplying an objective to teams of students, who have six weeks to conceptualize, design, build, and test their robotic solution through a series of two-minute qualification and elimination rounds during a three-day competition. This format requires that teams strategize and build into their design both offensively and defensively.

Through the program students are able to:

- Learn how to work in a team by developing one's communication skills
- Learn engineering and financial skills through various programs
- Promote good sportsmanship
- Maintain the integrity of our members and team
- Help the community
- Leadership opportunities
- Respect each other as well as the community

Team Organization

Number of members (can compare to first year), Numbers of Mentors, Email, Location, Awards, years as a team?

- 176 members
- 16 mentors
- 24 years
- 1200+ alumni
- 96% of alumni enter a STEM field

	Established March 1997	Current: December 2020
Members	9	176
Officers	1	12
Mentors	1	16
Community Service	None	Over 1,000 hours

Type	Year
Chairman's Award	2010
Division Winner	2001
Division Finalist	2017
Regional Winner	2003, 2008, 2008, 2017
Regional Finalist	2001, 2002, 2002, 2009, 2010, 2020
Entrepreneurship Award	2007, 2015, 2018, 2019

Sponsor Relations

MVRT's sponsors provide us with a variety of support, ranging from monetary contributions to store discounts, mentors and more. We have grown from a few sponsors in 1997 and now have 12 sponsors supporting us. They provide us with mentors and grants to fulfill our engineering aspirations.

We accept support in the form of:

- Monetary Donations
- Contributing advisory support of paid volunteering hours
- Donating equipment (software, hardware, parts, etc.)
- Donating or providing a discount on goods and/or services

We maintain strong partnerships with our sponsors through:

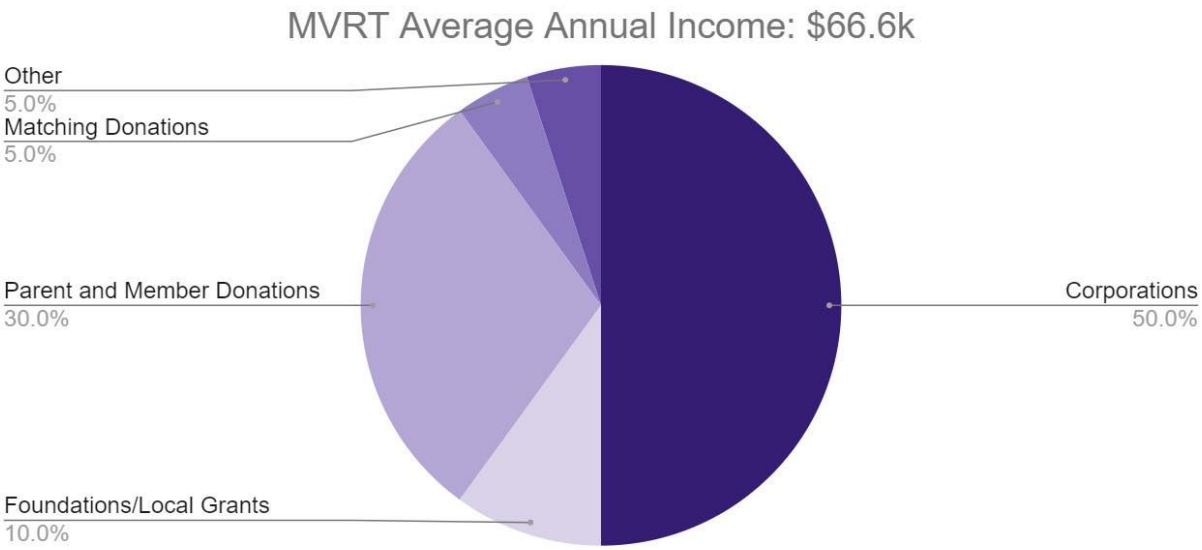
- Working on special projects (Google Home Arm, Intel RealSense Camera)
- Attending sponsor events (Intuitive Surgical's Open House, Intel Kids Day)
- Inviting sponsors to team events (Kickoff, Regionals, Awards Night)
- Providing members internship opportunities
- Keeping open communication (Newsletters, End of Season Report)

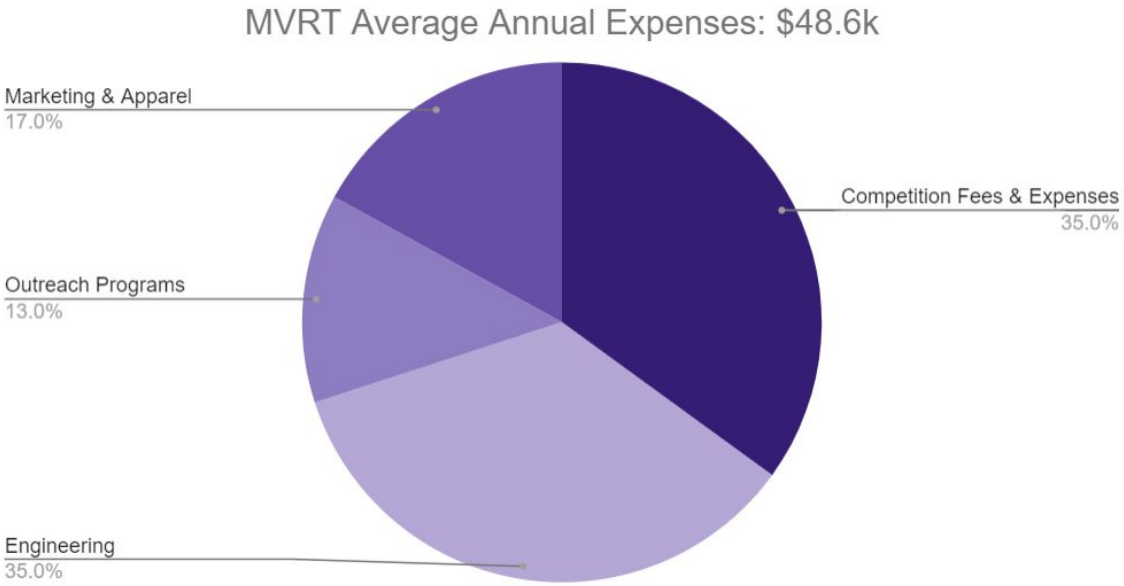
We recognize our sponsors by displaying name/logo on:

- Team Website
- Apparel
- Banners
- Robot Side Panels

Finances during the Pandemic

Even during the Pandemic, MVRT continues to persist in making an impact in the lives of our members and our community through a variety of projects and initiatives in Operations and Engineering. To fund these actions, MVRT has had a new Income Goal of *$40,000* to remain sustainable, and intends to spend over *$25,000*. However, raising an income of over 40k is no easy task. With many companies restricting their foundation and community grant portfolios, access to a large portion of our annual income has diminished during the pandemic. Therefore, any donations and sponsorship grants that we do receive in these times become even more valuable and are deeply appreciated. Below is information for our annual (non-Covid-19) fiscal years.


MVRT Average Annual Income: $66.6k
Other
5.0%
Matching Donations
5.0%
Parent and Member Donations
30.0%
Foundations/Local Grants
10.0%
Corporations
50.0%


MVRT Average Annual Expenses: $48.6k
Marketing & Apparel
17.0%
Outreach Programs
13.0%
Engineering
35.0%
Competition Fees & Expenses
35.0%

Current Sponsors

arm

Google

the foundation
FREMONT UNION HIGH SCHOOLS

Abbott Fund

ZOOX

INTUITIVE Foundation

Western Digital®

BAE SYSTEMS

PayPal

NASA

Rotary Club of Cupertino

Team Structure

MVRT is divided into two departments: Engineering and Operations. Engineering is subdivided into Mechanical, Electrical, and Software, whereas Operations is subdivided into Outreach, Marketing, and Finance. The Operations and Engineering departments collaborate to make important decisions and organize events. Communication is centralized to two platforms: Email and Discord. Discord is where the bulk of all the conversations occur from meetings to logistics, and email is used for team-wide announcements. During build season, the Engineering and Operations directors select a group of team leads, who work within their project teams and communicate with officers through Discord. MVRT also utilizes social-media platforms for advertising team image and keeping the community informed on upcoming dates and activities. Due to the change to remote and online activities, more online team-bonding events have been held recently to ensure that our team remains entertained and intertwined as a community over this rough period of time for everyone. Trainings are crucial to MVRT's success as a team because it helps to attract new members, keep the minds of veterans fresh, and ready to move into the new season, and helps inspire new members to be more eager to learn and contribute to team activities. Due to the pandemic, however, the team has moved to hosting online trainings, in hopes of continuing the training to keep everyone's minds fresh.

Response to Coronavirus

During the pandemic, MVRT has moved all work online such as hosting team-wide trainings for our incoming rookies and veteran members through online workshops and lectures that both teaches and engages them in an informing manner. These trainings encompass what they need to know for all divisions from finance to electrical. As a result, our members become more invested in our various tasks, removing the narrow focus towards engineering in our team culture. We also are seizing the lack of a complete FRC season to have our members learn in more depth the aspects of engineering and operations, including building hard skills such as CADing, to soft skills such as leadership.

OUTREACH PROGRAMS

Taiwan

MVRT invited over 25 international students over the summer of 2016 to tour our facilities and learn about the FIRST Robotics Competition. In early 2017, we continued the program and invited a new group of 30 international students to tour Monta Vista once again. MVRT also held a demo for the Taiwan Exchange Students. We are now supporting them as they start their own FRC team. The team is currently meeting on a daily basis based on the coach's responses and has had a successful kickoff. They are meeting for Build Season and we are in constant contact with them for them to be ready for this season. MVRT has also invited 25 new international students during the season this year to tour our facilities. We hope to continue a strong relationship and have them visit our facility every year and host a demo.

Sisters in STEM

Sisters in STEM (SiSTEM) is a program founded by our female veterans in 2016 to combat the lack of girls in STEM and encourage more females to join the team. Many girls felt discouraged to be a part of the team, especially in the engineering divisions, and MVRT often experienced low retention rates of female members. To combat the lack of diversity in STEM, the SiSTEM initiative was introduced. MVRT recognized the gender gap that currently exists in engineering fields and provided a solution to the problem. With this program, we have had an 80% increase in female attendance and member retention and an increase in overall team morale. With more people involved in our design and execution, our team has improved as a whole, as has our community.

PACE & STEM4KIDS:

Pace and Equity are programs founded with a mission of expanding the world of STEM to those in our community to those who are underprivileged. We also wanted to provide more STEM education opportunities for special needs students. Through these programs, we hope to expand our mission to help provide equal opportunities to everyone in our community.

FIRST LEGO League (FLL)

FLL is a program that MVRT sponsors for middle school kids interested in STEM. MVRT members have mentored 60 FIRST LEGO League (FLL) teams since 2003. Through FLL, we teach students engineering and robotics skills. Our FLL students develop skills essential to flourish in the FIRST Robotics Competition, including team management,

leadership, and communication, while their coaches develop mentorship skills that can be applied to their activities on our team.

Hongyun Art

One of our most unique and innovative outreach programs is Hongyun Art—a series of classes based on teaching kids STEM through art. We worked with Hongyun Art, an art studio, hosting camps for Scratch and Python, and are in the works to start weekly classes. We plan to add courses in Java and implement Arduinos soon. Overall, the partnership is fulfilling to both sides, as MVRT students are able to gain insight in art and creativity while Hongyun Art students can learn STEM skills. Since the pandemic, we started another endeavor to help students build interactive art projects that will be exhibited at art displays and expos next year. We have been teaching engineering skills to art-oriented high school students, helping them apply tech to make large-scale art installations such as a 17-by-5 foot array of wooden tiles that each change angle to reflect light in response to a viewer's movements.

Ohana

MVRT formed a partnership with the Ohana Club, a club at Monta Vista dedicated to providing special education students with as many skills as possible, to teach students STEM concepts in an interactive, hands-on way. Throughout the years, our curriculum has evolved and improved based on feedback from both the Ohana students and the Ohana officer team. The program was founded in 2012 and has grown to have over 60 special education students participating in the program.

Think FIRST

MVRT stepped in when the Cupertino Union School District canceled the GATE program in 2005. To fill in the gap left by GATE, we offered the community free STEM education by holding weekly classes at local middle and elementary schools, developing a curriculum to teach basic engineering skills. The program has since taught over 300 students, many of which have joined FIRST programs. Through this program, students honed their communication and management skills and furthered their own understanding by teaching others.

Where We Go


UCLA
BRUINS
THE UNIVERSITY OF CALIFORNIA
IRVINE
SAN JOSE STATE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
THE JOHNS HOPKINS UNIVERSITY BALTIMORE
SWARTHMORE
SAN FRANCISCO STATE UNIVERSITY
1899
CARNEGIE MELLON UNIVERSITY
PITTSBURGH PENNSYLVANIA 1900
CALIFORNIA INSTITUTE OF TECHNOLOGY
1891
VE RI TAS
HARVARD
THE PENNSYLVANIA STATE UNIVERSITY
1855
VET TES EN NOV TAM TVM
PORTLAND STATE UNIVERSITY
DOCTRINA URBI SERVIAT
1946
Eruditio et Religio
OHIO STATE
RENSSELAER POLYTECHNIC INSTITUTE
1824
UNIVERSITY OF CALIFORNIA
SAN DIEGO
NYU
SANTA CLARA UNIVERSITY
1851
IHS
PURDUE
UNIVERSITY
DARTMOUTH
VOX CLAMANTIS IN DESERTO
1769
1800
ILLINOIS
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN
SLUG
UNIVERSITY OF CALIFORNIA SANTA CRUZ
UNIVERSITY OF CALIFORNIA BERKELEY
1868
UNIVERSITAS BOSTONIENSIS CONDITA MDCCCXXXIX
RICE
OWLS
NORTHEASTERN UNIVERSITY
VERITAS VIRTUS
BOSTON MASSACHUSETTS
1870
GEORGIA INSTITUTE OF TECHNOLOGY
PROGRESS AND SERVICE
STATE 1885
UNIVERSITY OF WASHINGTON
1861
CALIFORNIA POLYTECHNIC STATE UNIVERSITY
DISCERE FACIENDO
1901
UNIVERSITY OF SAN FRANCISCO
Penn
University of Pennsylvania
MIAMI UNIVERSITY