

***FIRST* Impact Award - Team 5993**

2024 - Team 5993
Team Number
5993
Team Nickname
Istech Robotics Society
Team Location
Bakırköy, 34 - Türkiye
Describe the impact of the <i>FIRST</i> program on team participants within the last 3 years. This can include but is not limited to percentages of those graduating high school, attending college, in STEM careers, and in <i>FIRST</i> programs as mentors/sponsors.
We, as IRS, are the milestones in our members' journey of becoming STEAM leaders. As a team that based on FIRST values, our aim is to implement these to our members starting from the very beginning of their journey. This philosophy of IRS has led 90% of our alumni to pursue STEAM majors in universities worldwide and continue their FIRST journey by volunteering, mentoring, and supervising. Following this path, 15 of our alumni are running STEAM projects by collaborating with our sponsors.
Describe your community along with how your team addresses its unique opportunities and circumstances.
Our fundraising events and community service give us an opportunity to make an impact on those around us. To spread the STEAM culture, in collaboration with the ISTEK Foundation, we created school funds and provided scholarships to students who have limited resources. With this initiative, we provided scholarships to 21 students, who are now a part of our FIRST family. Also, in accordance with FIRSTLikeAGirl (FLAG), we included 13 more girls in the world of STEAM through our scholarship.
Describe the team's methods, with emphasis on the past 3 years, for spreading the FIRST message in ways that are effective, scalable, sustainable, and creative. How does your team measure results?
Our priority is to spread the FIRST message by drawing attention to gracious professionalism. As we aim to improve ourselves and our society, we organize workshops in fields such as robotics, coding, engineering, and safety. We are continuing to interiorize FIRST values by integrating them into daily life. Within 3150+ outreach hours, we reached 12000+ students via 50 FIRST Tournaments, 2 Kick-Offs, and 220+ workshops. We measure the results from the number of participants and feedback forms.
Please provide specific examples of how your team members act as role models within the FIRST community with emphasis on the past 3 years.
To lead the next generations as STEAM leaders, we participate in events as judges and volunteers, becoming role models. We hosted 2 Kick-Offs, 44 FLL Explore, 6 FLL Challenge tournaments attended by 807 FIRST teams. To serve our community we work by physical and virtual workshops. In the past 3

years, we served 3000+ hours of community service by organizing 71 workshops, 7 leadership seminars, and running 14 coding festivals and 2 Maker Fairs to introduce robotics to underprivileged students.

Describe your team's initiatives to Assist, Mentor, and/or Start other *FIRST* teams with emphasis on activities within the past 3 years.

Our philosophy as Istech Robotics Society is to advocate for FIRST values and implement these values in our lives. We have started 7 FLL Challenge, 8 FLL Explore, and 2 FRC teams. Providing the necessary tools and adequate curriculum for young learners has always been our priority. We have also mentored 26 teams with our alumni. Moreover, we have assisted 28 FIRST teams with online and face-to-face meetings where we answered their questions and provided them with necessary materials.

Beyond starting teams, what initiatives have you done to help inspire young people to be science and technology leaders and innovators? What results have you seen from your efforts in the past 3 years?

For a sustainable cycle, we create projects to familiarize children with STEAM. Thus, we visited 16 primary schools and provided STEAM training to 1826 students. We ran annual fairs called HOUR OF CODE which helped us introduce 2500+ primary-secondary schoolers to STEAM. We provided \$30,000 and computer-STEAM workplaces to Cumhuriyet Yüzyılı school, named after the 100th year of our Republic. With these workplaces, we aim to integrate students into the FIRST Community that rises constantly.

Describe the partnerships you've created with other organizations (teams, sponsors, educational institutions, philanthropic entities, etc.) and what you have accomplished together with emphasis on the past 3 years

Through our partnerships, we arrange awareness events. Collaborating with the Turkish Red Crescent, we held workshops regarding first aid, blood drives and collected 684 units of blood, attended by 127 people. In the past 3 years, we hosted 18 FIRST Tournaments with the Science Heroes Association, which organizes FLL Tournaments in Türkiye. With the Turkish Spinal Cord Paralytics Association, we organized seminars, workshops for students and physically disabled people and reached 400+ people.

Describe your team's efforts in the past 3 years to promote equity, diversity, and inclusion within your team, *FIRST*, and your communities.

As IRS, we held 15 FLAG workshops and reached 2500+ people with a youth coach program in 7 cities. To practice equity in STEAM, we provide fundraisings, 2 equity seminars, sign language training for FIRST teams, and workshops for intellectually disabled people yearly. Partnering with the Foundation of Children with Leukemia, we provide STEAM education to those children. Through these, we fostered equality, inclusion and also broke the prejudices of people, proving that STEAM is for everyone.

Explain how you ensure your team and the initiatives you have created will continue to run effectively for the foreseeable future

Sustainability is a key factor in our team. By creating subgroup leadership positions we nurture new leaders and help them develop team management skills. Our subgroup leadership positions are open to all members, our recruits are welcome to join executive board meetings. We have seen the advantages of this model for years since our team captains are selected from the people who have previously led subgroups. By creating a viable team management model we ensure the continuation of our team.

Describe your team's innovative strategies to recruit, retain, and engage your sponsors within the past 3 years

In the past 3 years, we have partnered with 32 remarkable sponsors. To ensure sustainability, our 8 alumni collaborate with them to form a mutually beneficial bond, which includes internship opportunities. Thanks to these internships, we have the chance to work on further projects together such as smart reaping and biotape. In addition to these projects, we redesigned computer and STEAM workplaces to increase efficiency by collaborating with an architectural firm in which our alumni intern.

Highlight one area in which your team needs to improve and describe the steps actively being taken to make those improvements.

The significant challenges we face are insufficient capacity for social responsibility events and the exchange rate in our country. According to the increment in the exchange rate, we need more sponsors each season through the expenditures of our team. Through our projects, we caught the attention of the Istanbul Municipality (IM) and used their venues for our event in 2023, and we plan to use them in the future. They also offered to cover any sponsorships we get under \$1000 up to \$1000.

Describe your team's goals to fulfill the mission of *FIRST* and the progress you have made towards those goals.

As a team that prioritizes making a global impact, our main goal is to lead our community to keep up with the developing world. Sticking to our mission, we identify problems within the community and create innovative solutions with our partnerships, sponsorships, visits, educational events, and the network we created between international FIRST teams. To promote FIRST culture and inspire our nation, we appeared on Show TV, CNN, TRT, and Bloomberg which reach 35.000.000+ viewers per day.

Briefly describe other matters of interest to the *FIRST* Judges, including items that may not fit into the above topics. The judges are interested in learning about aspects of your team that may be unique or particularly noteworthy.

After noticing a student who had congenital bone disease, we produced a 3D glove prototype for him using EMG and Arduino Nano muscle signal sensors cooperating with the Robotel Foundation and Maker Kid. Furthermore, we designed a prosthetic leg for a dog that had lost its leg, with support from veterinarians. We created a recyclable tire called "Eco-Tire" using natural materials such as fishbone to reduce air pollution with SEPA and a biocoal from rosehips to produce fuel with renewable energy.

Judge Feedback

Who/When

Feedback

Mar 23,
2024
11:32:55
AM EST

If you were an objective observer, how would you define our team contributions' impact on our world?

An area the team has an opportunity to improve.

Something that really impressed the judges.

Essay

In the past three years, #5993 has noticed the positive impact of experiences and world views individuals and society gain while participating in STEAM. Establishing our relations with the values of FIRST, we created "The Objective" that guides our members to be beneficial within our community. And this is where

the story of the Phoenix begins...

THE OBJECTIVE Our objective is to be the milestones in our members' journey to become future STEAM leaders. Each step we take as a society serves as a distinct stone paving the way toward reaching our objective.

SUSTAINABLE MODEL As IRS, the sustainability in our society is based on a scale inspired by our logo "The Phoenix". Each year we have at least 30 rookie members who start as "ash" members who become experts in certain fields and turn into "phoenixes". Once they become "phoenixes" they lead new "ash" members in their area of expertise. Thanks to this model, the IRS is reborn from its ashes every season.

As a team of 122 members and 8 mentors, human resource management can be a challenge. To increase efficiency, along with "The Phoenix Scale" we created a CRM system and subgroups. Each subgroup manages tasks under supervision with its workflow. With this system, we not only maintain an efficient flow but also pass on knowledge and resources to new members.

IRS contains FRC, FLL Challenge, and FLL Explore teams, making us an umbrella organization. Once our FLL Explore members adapt to FIRST Core Values participate in the FLL Challenge, graduate from our FLL teams, and become a part of our FRC team. After their journey as students end, they return as mentors to create a sustainable model. As a result of our involvement in FIRST, we leave a positive impact on our community to build a better future. Thanks to this model of ours, the Istech Robotics Society includes 1800+ students from 45 teams in 13 different cities and is expanding its wingspan day by day.

CONTRIBUTIONS TO FIRST As one of the leading teams in organizing FIRST events, we host and run organizations to pave the way for future STEAM leaders. We hosted 44 FLL Explores, and 6 FLL Challenge, started and mentored 12 FLL Challenge, 11 FLL Explore, and 3 FRC teams, and assisted 28 FRC teams. Besides, we ran 2 FRC Kick-Off hosting 16 instructors with a total of 729 members from 28 FRC teams and held 13 different workshops with FYF, HASBRO, SIEMENS, and TEKYAZ covering the most needed skills during the FIRST seasons. Also, we started an initiative called "FIRSTUnites" which brings together 11 FIRST teams from the Canary Islands, Latvia, Japan, Brazil, and Shanghai to exchange experience, discuss our plans and the method of managing our teams.

GIRLS IN STEAM We prioritize creating a community that values equity, diversity, and inclusion through our objective. As the sole ambassador of #FIRSTLikeAGirl in Türkiye we work to include women in STEAM. We have an Instagram account dedicated to #FirstLikeAGirl and created #ilhamol (#inspire) trend in Türkiye. We designed digital magazines and booklets including lives of inspiring women in STEAM. Moreover, we have created a #FIRSTLikeAGirl website and blog. We also organize annual conferences and seminars about problems girls face in STEAM and FIRST. Through these projects, we reached 5000+ people, and 50+ FRC teams. With every initiative, our impact gets stronger and wider.

PARTNERSHIPS WITH ASSOCIATIONS AND FOUNDATIONS

SRP (Social Responsibility Project) Symposium With the Hearing Impaired and Their Families Association, the Istanbul Youth Platform, and LÖSEV, we have been organizing SRP symposiums where high school volunteers find solutions to problems associations face, reaching 1400+ students. Besides, we raise and direct donations for individuals and organizations.

Turkish Red Crescent With the Turkish Red Crescent, we annually organize safety seminars, first aid training, and disaster conferences to raise awareness reaching 1000+ people. We also organize blood drives annually. Last year, we collected 684 units of blood, which was a record in Türkiye in terms of the number of units collected in a day.

Robotel We had “Maker Kid” workshops and gathered information on congenital bone diseases. Thus, we designed a prosthetic and turned it into a prototype using a 3D printer with Robotel.

Turkish Spinal Cord Paralytics Association The Turkish Spinal Cord Paralytics Association (TSCPA) is a foundation that helps disabled people to join social life. With TSCPA we organize seminars and hold workshops to include physically disabled people in FIRST and STEAM, reaching 400+ people.

LÖSEV LÖSEV is a foundation that provides financial and moral support to people with leukemia. We reached 900+ people with our awareness conferences. We volunteered in the events they organized by providing translation support and handing out brochures and booklets. As a team that prioritizes equity, we also provide STEAM education to children with leukemia.

PARTNERSHIPS WITH OUR SPONSORS

Workplace Support to Ankara Cumhuriyet Yüzyılı School To spread FIRST and STEAM, we supported the Cumhuriyet Yüzyılı school by providing \$30,000 and establishing computer and STEAM workplaces designed by an architectural firm to raise efficiency.

Internship Opportunities and STEAM Projects Our sponsors provide internships to our alumni in their prestigious companies which allows them to continue their careers and create STEAM projects forming mutually beneficial bonds. Our alumni produced a vision-processing project called “smart reaping” that collects ripe tomatoes and a biotape with 2% Matricaria Recutita, 8% Polycaprolactone, and 90% Dichloromethane to heal skin diseases. Yeditepe and Bahçeşehir University provided our alumni with academic and laboratory support. Currently, 8 of our alumni take part in these internships, allowing them to fill their CVs with outstanding companies’ names.

STEAM Scholarships with the İSTEK Foundation In our STEAM workshops, we spot students interested in STEAM and are unable to pursue it due to limited resources. With the İSTEK Foundation, we gave out full scholarships and changed 21 students’ lives from middle school to university level so far.

SolidWorks With one of FIRST’s most important sponsors, Solidworks, we created an educational video published on their website that includes our experiences in the designing and manufacturing process of our robot.

Earthquake Donations with İSTEK Foundation Being a first-degree seismic zone country, last year, we faced two consecutive earthquakes with 7.7 and 7.6 magnitudes. We assisted the victims by donating 2 trucks of supplies to the affected areas with the support of İSTEK Schools. We also hosted them in our school and gave moral support by organizing fun sessions.

PROTECTING THE ENVIRONMENT

ECO-FIRST Embassy We aim to raise a generation that protects and values the environment in light of our “objective”. We were declared as ECO-FIRST’s ambassador in Türkiye. Our mission is protecting the environment via projects and campaigns. We programmed the ECO-FIRST’s website.

Eco-Tire Knowing the negative effects of plastics on our environment, we produced an “eco tire” with SEPA that minimizes active carbon usage from natural materials such as china clay and fish bone. We earned the “Most Creative Project Award” from the Istanbul Municipality and decided to use it as our robot’s tire based on feedback from FIRST Judges to start integrating it into the FIRST community.

BIOCoal Currently, our most-used fuel choices contribute to pollution and environmental issues. Therefore, we need cleaner energy sources to lower pollution rates. Thus, we created a BIOCoal from rosehip, which neutralizes the carbon it releases.

Environmental Conferences We organize annual conferences to draw attention to environmental topics. In these conferences, we arrange 4 committees that cover a sub-topic and the participants prepare presentations including solutions. In recent conferences, our focus was on natural disasters, and renewable-energy sustainability and we reached 300+ students, 100+ teachers.

EDUCATIONAL EVENTS We work to include new members to the FIRST community via various initiatives such as STEAM workshops we hold in orphanages and underprivileged schools, and our educational camps on 3D modeling, programming, and Photoshop that receive 350+ requests each season. We hold annual “Hour of Code” fairs that teach the basics of coding and algorithms reaching 2175 students. Moreover, we organized Maker Teacher Trainings that reached 2200+ teachers in 18 schools and started sign language workshops after a meeting with an FRC team including deaf members. To further assist our community, we run Career Days for students to analyze their interests in choosing their professions. Also, we hold “FRC 101” workshops on various topics such as team and time management during the robot production process.

VISITS In the last 3 years, we visited 16 primary schools and gave STEAM workshops including mBot, Arduino, and LEGO WeDo training to 1567 students. To further include them in the FIRST community, we encourage their schools to start FIRST teams and plan on mentoring once they are established. We also worked with Robotistan to provide 20 Arduino Uno Starter Kits to underprivileged schools and collected donations for students. In line with our objective, we visited schools for intellectually disabled people of different ages and gave STEAM workshops, donated clothing, and gave them an entertaining concert.

As team #5993, our mission is to pass on FIRST and STEAM culture to the next generations and make a global impact. We spot our society's problems and develop innovative solutions with our partnerships, sponsorships, visits, and educational events by sticking to our “objective”. To break stereotypes, we include people in STEAM, believing that everyone can become a STEAM leader. We are reborn from our ashes. The story of the Phoenix never ends.;

