

## Marwa Zaryab Final

After the COVID pandemic, Marwa noticed a lack of availability and community knowledge of FIRST programs during this time and therefore made it a personal mission to inform local youth of the opportunities available to them. In 2022, Marwa worked with nearby elementary and middle schools to conduct demonstrations and recurring programming workshops in order to spark interest in after school STEM programs. With this groundwork laid out, she will be leading her FRC teammates to start FLL teams at the middle schools in summer 2023. Currently, Marwa is creating guides and introduction projects using FTC kits that she will conduct with students aged 11-13 at these middle schools to demonstrate the sustainability and potential growth of their FIRST journeys. During her post-secondary education, Marwa plans on mentoring Team 1241, being a key member of the annual Girls in STEM Olympics committee and furthering FIRST sustainability in her city via FLL and FTC team development at feeder elementary and middle schools.

Marwa's technical journey started in the THEORY6 machine shop in 2021. During limited hours and mentorship, she worked with her senior teammates, shop teacher and manuals to master using equipment in the shop such as the lathe, bandsaw, CNC router and mill. Using these skills, Marwa was a large contributor to the manufacturing and build of Team 1241s robot in the 2022 season. Determined to be an effective technical leader on the team, Marwa wanted to expand her knowledge across multiple horizons which led her to learning how to design using Inventor over the summer. During the offseason in 2022, Marwa refined her electrical skills and carried it forward by running basic electrical and design workshops to new students in order to give them the strong foundation she was restricted when she first began. Alongside this, Marwa actively sought out opportunities to learn how to program in Java and Python. In 2023, as the electrical lead, Marwa wired the robot, programmed commands on the arm, intake and claw, wrote base code for several subsystems of the robot and worked on odometry for the drive. Marwa's passion and curiosity for programming is pushing the team to explore other projects to increase competitiveness such as a possible scouting application for competitions.

In the 2022 offseason, Marwa has made it a priority to create a strong relationship between Team 1241 and our supporters. This starts with her enthusiasm to spread the message of FIRST and importance of the FRC program with prospective parents and schoolmates in order to increase enrollment after the COVID pandemic. Marwa has planned and been an integral part of several parent showcases in order to get themselves and prospective sponsors interested in not only Team 1241 but also FIRST robotics. This year, Marwa has been a leader in the team's push for new community sponsorships by working on a revised sponsorship package and collaborating on a subteam to distribute it to potential vendors. Marwa's creativity shines through the FTC guides she is developing so middle school students can use donated FTC kits to work on meaningful but fun projects that allow them to explore various aspects of STEM. She is pushing towards restarting Team 1241's Library program to bring community robotics programs back to community spaces in Mississauga and other cities in the GTA. Marwa is also on the

2023 Girls in STEM Olympics planning committee and plans on using her technical skills to create unique challenges that will incorporate all aspects of STEM.

A leader is someone who teaches their peers, grows alongside them and shines when they succeed. This is a definition of leadership Team 1241 has learned about and believed in since Marwa joined the team in 2021. Marwa inspires younger females on our sister team, Team 1285 by working alongside them in the offseason to teach them basic design and electrical concepts in order to start their foundation off correctly. Marwa is a leader during Team 1241's only girls team at the STEMley Cup offseason event, teaching other females on both teams how to be confident in their skills and efficient in complex situations. As our team's 2023 driver, Marwa ensures her teammates that she is representing all their hard work on the field and is counting on their support across all competition roles, always making sure that everyone understands they are equally accountable in the team's success. She motivates students and mentors by candidly sharing her success and struggle stories so others can learn from them.