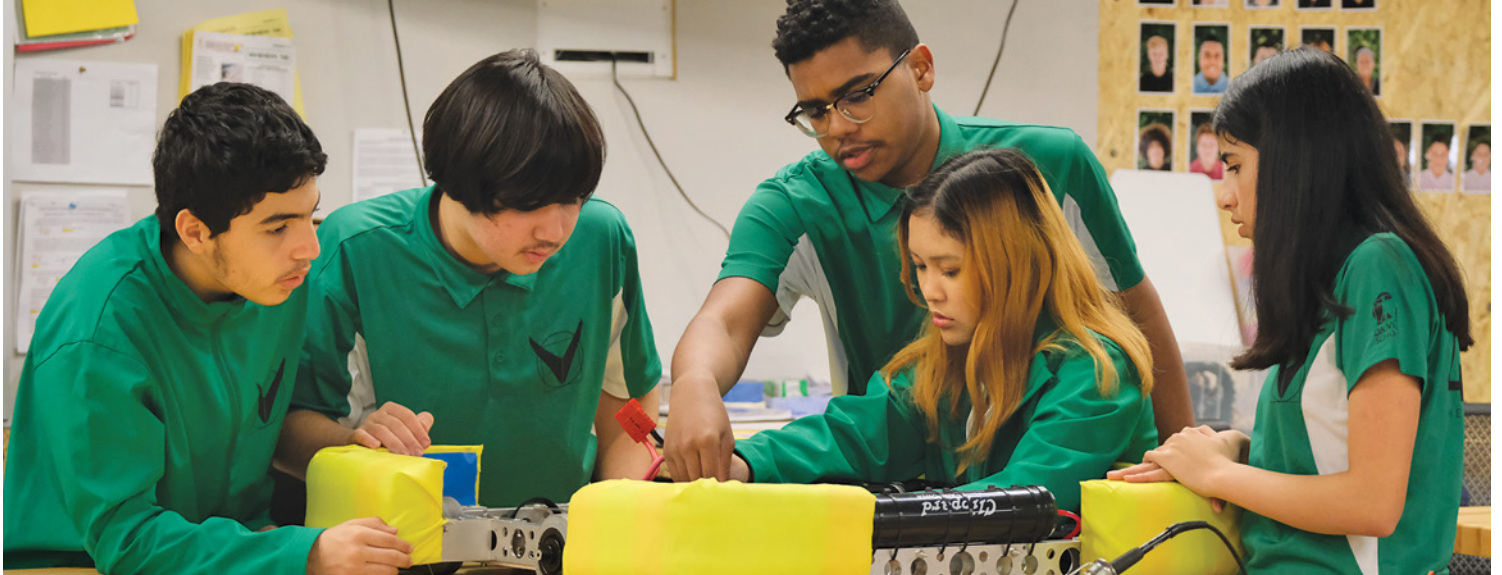


Working Together to Create the Next Generation of STEM Leaders



“We have in our own backyard, a great workforce that’s primed and eager to solve the world’s toughest problems.”

— FAZLUL “FUZZ” ZUBAIR, SYSTEMS ENGINEERING MANAGER AT RAYTHEON TECHNOLOGIES



Fuzz Zubair inspects Team 4201 The Vitruvian Bots' robot while students prepare for the next match

For more than 100 years, Raytheon Technologies has been accelerating ideas to solve some of the world's biggest challenges by bringing together the brightest, most innovative minds across aviation, space, and defense.

Raytheon Technologies is committed to building a diverse workforce talent pipeline that is capable of imagining and developing sustainable solutions to the world's toughest challenges – tomorrow and beyond. That's why Raytheon Technologies has been a longstanding partner of *FIRST*®, the world's leading youth-serving nonprofit in advancing STEM education. Together, the two organizations are illuminating the path between students and their future by supporting events, programs, and thousands of teams globally, through funding and time donated by hundreds of employees.

- Raytheon Technologies annually offers grants to help support the development of *FIRST* teams in communities around the globe. In the 2022-2023 season, Raytheon Technologies will give over \$740,000 in funding to nearly 400 teams and provide hundreds of employee mentors and coaches.
- Most recently, Raytheon Technologies was a sponsor of *FIRST*'s **More Than** campaign. The campaign centers on dismantling labels for young people and helping kids everywhere recognize their worth and abilities. Both organizations recognize the power of STEM education in inspiring the innovative spirit and self-esteem kids need to tackle the world's greatest challenges.

Supporting the Development of a Diverse Workforce

Since 2011, Fazlul “Fuzz” Zubair, Systems Engineering Manager at Raytheon Technologies, has served as lead mentor for Team 4201, “The Vitruvian Bots,” from the Da Vinci Schools in El Segundo, California.

As a mentor, Fuzz teaches students skills that are critical to their long-term success. The Vitruvian Bots have been recognized for their embodiment of the *FIRST* mission and core values, numerous competition awards, and were a winning team of the 2019 *FIRST* Championship.

Fuzz notes that working with *FIRST* provides the opportunity to witness tomorrow's emerging talent in action. “We have in our own backyard, a great workforce that’s primed and eager to solve real-world problems,” Fuzz said. “And we’ve already seen that. I have already brought in 15 *FIRST* alumni into Raytheon Technologies, and I’m just one mentor. We have hundreds of mentors across our businesses across the globe doing the same thing.”

"I was making the choice to equip my children for their future, but little did I know all those years of coaching were developing ways for me to show on my resume that I have a lot of skills that aerospace companies are looking for."

— MARINA WALLIS, *FIRST*® LEGO® LEAGUE COACH AND SENIOR SYSTEM ENGINEER, RAYTHEON TECHNOLOGIES

"This experience has challenged the students to adapt quickly to change, improve communication, better understand the impact their decisions have on others, be kind and courteous to one another and to identify improvements throughout the process. Having these skills are key, not only to a future in STEM, but also as responsible human beings."

— CLARY CARRION, TEAM MENTOR & MANUFACTURING ENGINEERING MANAGER, RAYTHEON TECHNOLOGIES

"You can't be what you can't see – *FIRST* gives students the opportunity to see professionals who look like them in fields they have never explored."

— ERIN MITCHELL, *FIRST* ALUM, *FIRST*® TECH CHALLENGE COACH, AND MANUFACTURING PROGRAM SPECIALIST, RAYTHEON TECHNOLOGIES

Inspiring Community Volunteerism and Career Pathways

Marina Wallis has always loved biology and science but had no exposure to engineering while growing up. After graduating with a degree in Biology at UCLA, Marina pursued education as a junior high biology teacher.

Years later, at the high school where her husband was a principal, Marina's son fell in love with the robotics program and asked to get involved with *FIRST*® LEGO® League. The high school team's mentor, also Raytheon Technologies' Fuzz Zubair encouraged Marina to start a *FIRST* LEGO League team.

Her work as a coach with her son's *FIRST* LEGO League team inspired her to change her career to aerospace engineering. She remarks, "I was making the choice to equip my children for their future, but little did I know all those years of coaching were helping me develop the skills that aerospace companies are looking for." Joining Raytheon Technologies in 2020, she is now a senior systems engineer.



Marina Wallis is a *FIRST* LEGO League Coach and senior system engineer, Raytheon Technologies

Expanding the STEM Talent Pipeline

NAE, a US national nonprofit organization, is a network of education, business, and community leaders that works to expose high school students to college, career, and education pathways to help them prepare for their futures. In fall of 2021, through its Raytheon Technologies partnership, *NAE* started two *FIRST*® Tech Challenge teams in Puerto Rico – the territory's first and only *FIRST* Tech Challenge teams.

The two organizations collaborated to provide the teams with resources and access they needed to be successful and competitive at the world level. Furthermore, Raytheon Technologies sent the two teams to the 2022 *FIRST* Championship event in Houston, where they met with leaders from Raytheon Technologies, *FIRST* and other teams. Now, they are working together with Raytheon Technologies to add new teams for this season and expand upon the success they've started in Puerto Rico.



FIRST CEO Chris Moore meets with the Puerto Rico *NAE* Teams, sponsored and mentored by Raytheon Technologies at the 2022 *FIRST* Championship

Giving Students the Tools for Success

Erin Mitchell joined a *FIRST* Tech Challenge team at the age of 13. Through the network of support and collaboration, Erin began to see engineering as a possible career to pursue.

"*FIRST* teaches you that no matter how your robot performs, your success is built on the relationships you develop – those relationships can help you expand your potential and push you to achieve more than you ever thought you could," said Erin.

Erin went to Iowa State University where she graduated with a Bachelor of Industrial & Manufacturing Systems Engineering and Industrial Engineering, and ultimately became a Manufacturing Program Specialist for Raytheon Technologies. "I would NOT be an engineer without *FIRST*...I would not work here without *FIRST*." Erin remains a volunteer in *FIRST* Tech Challenge as both a team coach and event volunteer. Erin is continually inspired to show her students that they can dream beyond what they think is imaginable. "You can't be what you can't see – *FIRST* gives students the opportunity to see professionals who look like them in fields they have never explored."



Raytheon Technologies' Erin Mitchell volunteering at a *FIRST* event



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