



The Highlanders Chairman's Essay

We are future engineers, the innovators of our community. We are the future teachers, the educators of the next generation. We are future leaders of our community, championing a better life for everyone in the world. To reach these aspirations, the Highlanders base their philosophy on four simple pillars: our mission, our community, our past, and our future. These four tenants always keep our passions strong, our minds engaged, and our futures bright.

Our mission is to provide elementary through high school students with hands on experience in the fields of science, technology, engineering, and mathematics; to provide students with real life business interactions with firms in the community; and to practice gracious professionalism, teamwork, and innovation. To accomplish our mission, we created a 501(c)3 non-profit company, Neaera Robotics, to create a FIRST think tank in Northern Colorado without the borders of a school holding us back. Currently, there are 8 FLL teams under the Neaera Robotics umbrella, and the company has helped six FRC teams get into stability, both financially and developmentally, their initial season. We've opened our shop facilities to all FIRST teams. We even taught a local FTC team how to fabricate basic parts, which ultimately allowed them to construct their practice field.

Within our umbrella, the Highlanders have taken the extra step, heavily mentoring and fostering three of the FLL teams, instead of just leaving them without support. As of now, all three of the teams have made it to their respective state competitions, and one has advanced to the World Festival. Wanting to extend our reach to those less fortunate than us, this past year, a few Highlanders started an FLL team in the local Boys and Girls Club. Working with the kids was an eye-opening experience for all of the team members involved, and they created future engineers out of kids who didn't even know what engineering was. Along the same vein, we established The Highlanders RoboCamp this summer. The program is intended to bring in local 3rd to 5th graders and teach them about STEM and FIRST values, with the intent that they join a FIRST team in the fall. Over sixteen kids participated in the program, all proceeds of the camp went back to Neaera Robotics to fund more robotics teams, and the camp has bright prospects for next year. Recently, we've hosted a "Coaches' Night" in the shop, which helped inspire four initially hesitant parents to start up their own FLL teams.

No matter how much the Highlanders can do as a group, we always need support. Over the years, our team has received sponsorships from local and national corporations. At the end of the year, we show them our thanks by exhibiting the product of all their investments: an awe-inspiring completed robot. But in order to fully thank these corporations, we give back to FIRST and our community, creating the next generation of the engineering workforce. One of our biggest perennial efforts to integrate FIRST and the community is the Liberty Regional and the Weld Regional FLL Qualifying tournaments, where all the Highlanders setup, refereed, and

even judged the kids. Even though we have an essential role in these two tournaments, Highlanders volunteer at many more FLL and FTC tournaments throughout the year. As recognition of our support, our whole team was honored with the "Volunteer Award" at the Liberty Qualifier. Past just the official tournaments, we involved ourselves by acting as "judges" for an FLL team's research project and by offering advice to another local, Worlds-bound FLL team.

Yet the Highlanders' outreach isn't limited to FIRST, as we are passionate about bettering the communities we've grown up in. Last year we created McKinney Backpacks (packs of food) to give to less fortunate kids and collected and delivered food to bring the community together after torrential rain and devastating flooding caused unprecedented damage in many cities in Northern Colorado. On a happier note, our team volunteers at an annual children's triathlon. We love cheering the kids on and seeing their exhausted, but ecstatic faces as they cross the finish line and are greeting them with a HUGE robot that they get to control! FIRST has become an incredibly personal vehicle of inspiration—a passion for giving back to our community is now a part of each and every Highlander.

Conversely, it's from that community the Highlanders survive. Whenever we present at schools around the district, demo at our FLL tournaments or even chat with our classmates, we draw students' interest, and they want to join our team. To ensure that we hit the heart of the kids who are interested, we've presented info about the Highlanders at two middle schools and three high schools. But this year, we're going to be upping our recruiting prowess by actively communicating to engineering students at both Liberty Common and Fossil Ridge High Schools.

After the students join the Highlanders family, they're quickly brought up to speed by the Highlander Mentoring Initiative. Each new Highlander is paired with a veteran member until they understand the ropes of machining, programming, and/or essay writing. Once they're fit, and have all the knowledge of the past Highlanders we know we've successfully ensured the future of the Highlanders for the years to come. However, we don't forget about our veterans. Every year, team vets are offered an internship to continue their STEM education at Neaera Consulting, one of the main sponsors of the Highlanders. Last summer, five members of our team pursued this opportunity and got to work on writing tablet applications for environmental monitoring. Furthermore, the availability of all the shop resources, even all throughout the summer allows the Highlanders to innovate and create impressive products. One of these initiatives this summer was to create a CNC plasma jet. Currently, this device stands as one of our most versatile tools, letting us delve into the new world of sheet metal. Even after members graduate and go on to pursue their own futures, they are expected to return to the team and mentor the next generation of the Highlanders and inspire them to achieve more and drive harder than any set of Highlanders before them.

To us, FIRST is much more than robotics competitions. It's the program that gives us the chance to be who we want to be-- the individuals who make a difference. Our inclination to serve our community has fundamentally developed us. Transferring our knowledge has created a foundation for the next generation. The Highlanders' progress isn't something we measure in

awards or trophies. It's something we measure in our impact on our members, and in our community.