

EPISODE 3

March 2020  
FREE FOR CIRCULATION IN FRC



**FIRST**

**RISE**<sup>SM</sup>  
THE FORCE IS BUILDING

# CHAIRMAN'S AWARD SUBMISSION





## Chairman's Essay

### *"My father gave up drinking to support my robotics competition"*

These are the thousand emotion-stirring words of a farmer's daughter, in an all-girls FLL team from rural Maharashtra. Along with winning the championship award, they also won the hearts of all with their passion and dedication to STEM. These girls have never stepped out of their village and yet, will now represent India at the world festival in Detroit. This team has been started, mentored and sponsored by us and we are proud to have made such a profound impact in the lives of these girls. Last year, it was the 'Sankalp Story': 2 FLL teams of underprivileged and hearing-impaired students whom we started, sponsored and mentored won the core values award at the FLL nationals. These experiences have shown us the human side of technology and taught us that the true joy of FIRST is in uplifting others; more than robots!

## First of FIRST

Our 5-year-old community team is the first FRC team from India from 15 schools across the city. It is a robust mix of diverse skills who consider themselves a startup. As such, Team R Factor functions as a highly efficient organization that is divided into sub-teams to facilitate members' work. We are a team of teams. During the pre-season, members undergo technical as well as non-technical training in the form of outreach events and workshops. Our strength lies in concepts like Kaizen, fishbone analysis, PDCA, root cause analysis and 5S this, makes our processes streamlined and helps us create SOPs saving time, money and resources. Pre-season is an amazing opportunity to foster the teams bonding through peer to peer mentoring thus, developing their skills and inclinations. Advanced knowledge of SolidWorks and electrical systems enables us to create a fully custom designed and manufactured robot in which, our members take great pride. FRC has honed skills of time management, leadership, collaboration and confidence along with responsibility in all our members. Our alumni have entered some of the most prestigious universities with scholarships due to their experience in FIRST and continue to profess the values of team R Factor at university by mentoring new teams there. Our mentor base has been growing each year.

## Investing in the future

'A goal without a plan is just a wish' and so, we have come up with a plan, to ensure a sustainable community. Engineering students who volunteer at FIRST events organized by us are trained so that they can mentor FIRST teams. This provides employability and motivates them to involve their peers and have fun with their FIRST experiences. Our judges' training sessions capture the attention of STEM enthusiasts and our pool of judges for FIRST programs has been growing ever since. Partnerships with 10+ training centres ensures progression of students through FIRST programs. Our relations with corporates ensure the inflow of capital and other needs of the ecosystem along with guaranteeing the long term continuation. Our unique model blends outreach with sustainability, where we collaborate with all stakeholders and FIRST national organizers thereby blurring competition and encouraging coopertition. In doing so, we have created an umbrella body for our community sharing parts, resources, camaraderie, and mentorship by the medium of our FIRST FACILITATION CENTER. R Factor has created a ripple effect and a paradigm shift in thoughts of collaboration.



### One year = 365 opportunities

The tapestry of our outreach is innovative and involves new audiences. This year, our team engaged crowds by bringing Sophia, the world's first robot citizen to India and conducting FIRST workshops at the same event. This event was attended by over 80,000 people. This year, we also held mock FLLs: for teams online and face to face using FIRST rubrics, to help them prepare for the competition by giving them written feedback. Some of the teams we assisted won the championship award and will represent India in Japan and the world festival in Detroit. Exhibiting our robot at school fairs and tech-fests helps build intrigue, where unique experiences like the hands-on construction of a robot chassis excite people to sign up for FIRST programs. Our team formulated a rubric based on FIRST's principals and applied it to IIT RoboWars, (an international competition of 82 elite teams) and RoboVR challenge (where sports blends with technology). We conducted a design thinking workshop that focuses on human-centred problem solving to create efficient solutions for real-world problems. Our team has collaborated with Snap's AR team to bring the excitement of cutting edge technology to schoolchildren. This Christmas, we added more glee and cheer to celebrations in malls by exciting over 10,000 people about FIRST. Our mentors got an opportunity to interview 50 international teams by volunteering as FIRST GLOBAL diplomats at the FIRST Global Challenge 2019 held in Dubai. Our team believes in finding ways of thinking about big problems and simplifying them; we created a simplified version of the FRC and FGC playfield drawings and made it available to all. We have recognized the power of Lego as an educational tool and initiated a Lego donation drive; Municipal schools that teach the economically disadvantaged were the beneficiaries of these as a part of our Lego Play & Learn initiative. We collaborated with SundayBricks to host Lego workshops. Working for the margins of the society has always been our priority: we designed a mobile education bus for the 'Touch Foundation' which rehabilitates street children. Our team supported and facilitated the launch of the 'Dream on India' coffee table book which has captured the dreams of school children pan India and has been signed by the President.

### #FIRSTWITHOUTBOUNDARIES

Being the FIRST FRC team from India came with a big responsibility. Over the past 5 years, we have been instrumental in aggressively promoting all FIRST programs as a mind sport; Completing 10,000+ hours of community outreach annually. We strive to promote an amazing experience for the 3000+ students who attend the FIRST events held by us. We demonstrate our robot, documents, and resources, connect students to coaching centres, and our mentor is a 24\*7 helpline for FIRST guidance. Our endeavour at these events is that students and families stay involved in FIRST. We have overcome political borders to reach out to teams in Bhutan, Nepal, Pakistan, Bangladesh, Sri Lanka, Indonesia, Turkey, Libya and Taiwan. We started a hashtag on Instagram creating a viral trend that challenges FRC teams to help or start FIRST teams from socially and economically weak backgrounds thus promoting the spirit of #FIRSTWITHOUTBOUNDARIES. Due to our efforts, there has been an exponential growth of participation in FIRST programs. Our team has had the opportunity to show our passion, collaborate as a team and give back to FIRST by sponsoring and assisting 2 FTC and 5 FLL nationals. We mentored and started 5 JR.FLL teams and 14 FLL, 2 FTC, 2 FGC, and 2 FRC teams. (6813, 7539). We have prepared and conducted the FLL tournament survival guide, workshop and FAQs which have been used by 15 FLL teams pan India. We started, mentored and sponsored the all-girls FGC team in 2019. Volunteering spirit thrives in our team with our mentors taking on the role of judges and judge advisors and our students taking on the role of event volunteers. Our team has started FRC teams 6813, 7539, 8206 and 6811, taking the total registered FRC teams in India to 5. We have tried to incorporate FIRST into the education system by frequently partnering with schools in events such as carnivals and fests.



### M.A.D. Making A Difference

Emulating our novel approach, other FTC and FLL teams have started to follow our model and handhold an increasing number of underprivileged or differently-abled teams. Our outreach disrupts the way our society looks at STEM programs and has created a cultural change in our country. High levels of academic rigor dissuade the community, especially girls from taking up hands-on STEM programs. However, the waves created by our all-girls FLL and FGC teams have caused tsunamis in the FIRST community and beyond, inspiring more girls to take up FIRST. Our team has evolved as an organization that invests in the future of children, ushering an era of co-operation, and competitive spirit leaving behind the social footprints.

### Lead the ship

Our efforts have been recognized by Members of Parliament, Chief Ministers, consulates and the President. We also collaborate closely with our sponsors, and they take great pride in our work. M&M, the largest automaker of India and Infosys, the largest tech company in India have been inviting us for the last three years to their founder's day celebration where we have spread awareness about FIRST and received the opportunity to interact with Nobel laureates. We have been featured in 2 magazines, 5 newspapers, 2 radio channels and 1 television channel. 6 international schools in Mumbai sponsor our venues for hosting FIRST nationals and kick-offs. N. Sekhsaria, the chairman of the country's biggest cement company has been the backbone for funding all the underprivileged and girls teams of FIRST India.

This culture of Dedication, Commitment, Involvement, Passion, Innovation, and Inspiration have enabled us to build the FIRST ecosystem in India. It has given us the strength to overcome the many cultural, financial and technical obstacles to form a balanced, well-rounded team that exemplifies the values of FIRST. Our FIRST Facilitation Centre is a step towards the goal of ensuring that every student in our country has access to FIRST. We are aimed at creating a level playing field of FIRST in India, giving every dream a wing. Building the change we wish to see. ■

### Team R Factor, Winning hearts with winning efforts



# Chairman's Essay Questions

Team Number: 6024

Team Name/Nickname: Team R Factor

- Q A Briefly describe the impact of the FIRST program on team participants within the last five years.**  
Members sensitized to real world problems- solve them with STEM, build personal skills like confidence, leadership, communication, time management and responsibility. 100% alumni pursue STEM in reputed colleges. Members completed 10000+ hours of service, realizing that the joy of FIRST is in uplifting others including underprivileged and differently abled. Team diversity and peer to peer learning promotes collaboration and respect. Members discover their passion: helping make career choices.

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- Q A Describe the impact of the FIRST program on your community within the last five years.**  
Got 15 schools to embrace FIRST. Started and mentored FLL team of hearing impaired students to promote inclusivity. FLL all-girls team mentored by us won the championship award at nationals; they have never stepped out of their village but will now represent India at world festival. Persuade chief ministers, Members of Parliament and celebrities to endorse FIRST. Enthused engineering majors to become mentors and impact villager to give up drinking. RF uses FIRST to make disruptive social changes

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- Q A Describe the team's methods for spreading the FIRST message in ways that are effective, scalable, sustainable, and creative**  
Our FIRST FACILITATION CENTER is an endeavor to make FIRST sustainable and has enabled many teams to participate in FIRST programs. Our outreach at industrial expos (150k people), presenting Sophia AI humanoid at university techfest (80k people), branding mobile schools, collaborating with Snap's AR team, conducting design thinking workshops, organizing LEGO donation drives, volunteering at FGC as FIRST Global diplomats, and the "Dream on India" project have made FIRST a pan India phenomenon.

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- Q A Describe examples of how your team members act as role models and inspire other FIRST team members to emulate**  
Aarav, Jai, Ryan, Varun and Arjun mentored Jr.FLL/FLL teams inspiring them to progress to FLL/FTC. Aadiv's expertise of SolidWorks inspired team members to learn CAD. Adhyan became India's top programmer inspiring Ryan to take up coding and progress from FTC to FRC. Aarav and Stuti's effective communication and leadership skills make FLL students want to emulate them. Our dean's list awardees being girls, are trailblazers inspiring girls to join FIRST community. We volunteer at all FIRST events.

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- Q A Team's initiatives to help start or form other FIRST Robotics Competition teams**  
We hosted demos and held webinars about starting and sustaining FRC teams. We have been successful in starting teams FRC 7539 & 6813. Trained mentors from other cities to start their own FRC teams (FRC 7719 & 8206 & 6511).Published simplified documentation for FRC teams. We handhold FRC teams by sharing customized parts and enabling them in outreach in the true spirit of coopertition. Our sustained efforts in training national and international mentors have influenced 5 potential FRC teams.

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- Q A Describe the team's initiatives to help start or form other FIRST teams (including FIRST LEGO League Jr., FIRST LEGO League, & FIRST Tech Challenge)**  
Over 5 years, we sponsored and assisted 2 FTC/5 FLL national championships, engaging 2000+ participants. Here we connected students to coaching centers. Shared all team resources. Donated 10 EV3 kits and many FTC parts. Recruited mentors. Made presentations at 50+ schools. We mentored and started 2 FTC, 2 FGC, 5 Jr.FLL & 14 FLL teams, including an underprivileged all girls team from a remote village and 5 FLL teams of underprivileged and hearing impaired students, promoting inclusivity.

# Chairman's Essay Questions



- Q A Describe the team's initiatives on assisting other FIRST teams (including FIRST LEGO League Jr., FIRST LEGO League, & FIRST Tech Challenge & FRC) with progressing through the FIRST program**  
We share handbooks, work area and tools, organize workshops and mentor to mentor training so that resource crunch is never a hindrance to progression. Our alumni mentor FRC internationally. Our collaboration with CAD centers enable students to prepare them for higher programs. FTC teams emulate our outreach of handholding other FIRST teams. We advocate FTC and FRC at FLL and FTC nationals. Our contagious enthusiasm encourages parents and siblings to stick on with FIRST programs.

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- Q A Describe how your team works with other FIRST teams to serve as mentors to younger or less experienced FIRST teams (including FIRST LEGO League Jr., FIRST LEGO League, & FIRST Tech Challenge)**  
We are a benchmark of GP and coopertition. Sharing documents, tools, workspace, & resources, customized-parts, simplifying playfields and conducting mock interviews for 16 FLL teams. We integrate FGC and FRC to mentor and start an all-girls FLL team. We conduct hands on chassis building workshops for FTC students. We partner with FLL teams to create FTC teams and collaborate with team 6813 and 7539 to host multiple FLL kickoffs and FTC nationals. We completed 2500+ hours of mentoring FIRST teams

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- Q A Describe your Corporate/University Sponsors**  
N. Sekhsaria, chairman of India's second largest cement company and MESCO Springs have been our sponsors since 5 years. Infosys- India's leading Software Company with a mkt cap of USD 50 bn, ENAM, India's largest investment banking company, Mahindra and Mahindra, India's largest automaker and CNS school are our sponsors us since 3 years. We also are sponsored by Axis Bank- one of India's top 5 banks with a mkt cap of 30 bn USD, SVKM universities trust, Zee- India's largest TV channel-2 years.

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- Q A Describe the strength of your partnership with your sponsors within the last five years**  
Invited to the Infosys Founders Day celebration for the last 3 years, interacted with Nobel laureates, leaders and change makers. Axis Bank wrote about our journey in its magazine with a reach of over 1 lakh people. M&M invites us to interact with their families to showcase our work and robot for 3 years and offered internship opportunities to team members. Mr. Sekhsaria has been the backbone for sponsorship for all underprivileged FIRST teams. CNS is giving us space to conduct FIRST events.

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- Q A Describe how your team would explain what FIRST is to someone who has never heard of it**  
FIRST is a unique STEM community where humanism blends with technology. Every moment is a celebration as there is opportunity to grow together and create an environment to build, code, communicate, cooperate, inspire and innovate. Through STEM competitions FIRST participants don leadership roles, learn to think big and give back to the community. FIRST humanizes us while preparing us for the machine world. It's a family of students, mentors and parents where fun and learning never stops.

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- Q A Briefly describe other matters of interest to the FIRST Judges, if any**  
Cost and time commitments become a challenge for hands-on STEM programs in India. By showcasing our team and the value that FIRST has added to our lives, we have tried to overcome this barrier. There has been noticeable change since the inception of team 6024. Because of Alumni getting placed in top universities and by winning many awards, R Factor is building the change we wish to see and recognised by parents as role models for their kids.

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- Q A For FIRST Robotics Competition teams older than 5 years, briefly describe your team's broader Impact from its inception,**  
Over the past 5 years, FLL has increased from 40 to 90 teams; FTC from 9 to 47; Jr.FLL from 4 to 110; FRC from 1 to 6. We have mentored 2 FGC teams and sponsored one. RF is the umbrella body for all stakeholders of FIRST in India hence portraying exemplary coopertition and GP values. Our team strives to incorporate inclusivity in all its endeavors hence promoting the message of #FIRSTWITHOUTBOUNDARIES; building the change we wish to see. ■



## Woodie Flowers Award: AADIV SHAH



**AADIV SHAH**

"To teach is to learn twice" This is the motto that Aadiv lives by. He has been a mentor for team R factor since I joined three years ago. He is an undergraduate engineering student, teaching and learning at the same time. As a construction lead, he has used his youthful energy and hands on experience to effectively communicate the art and science of Robot building. I have repeatedly seen his patience and skill of simplifying complex subjects, not only in FRC but also otherwise. When mentoring the FLL 2019 teams of hearing-impaired, there were multiple aspects of the challenge that we did not understand. Despite his university assignments, Aadiv ensured that he supported and helped us in construction of their FLL robot.

Aadiv introduced CAD to our team and insisted that I join the certified CAD program along with other team members. This skill has made our teams construction process robust, modernized and faster. He ensures that no one is left out during a discussion; even if it is a complicated subject.

In my first year at FRC, the team was discussing projectile motion to build a ball shooter. As a complete novice to FRC, I was lost. He frequently stopped the discussion to check everyone was on board. In doing so, he has made sure that no one is intimidated by Physics and trigonometry and the concepts are applied in our robot building.

His zeal to make 3D printed and customized parts ensured that

the 2019 Deep space robot had a fail-safe grabber. His stress on form meets function makes design learning interesting. He advocates to blend aesthetics into machine design. He introduced a simple, elegant, modular and easy to assemble west coast chassis. His frugal innovative thinking of interfacing the west coast chassis with the tough box mini and designing a bearing block with SolidWorks has now become a standard component for all our robots. He streamlined processes cutting down on waste and promoted sustainability. He is a bridge between our mentors' experience and the team's youthfulness.

Collaboration and GP are a way of life for him hence, his discussions often steer towards how empathy is quintessential to solve real-world problems by STEM. His multiple roles in the FIRST community as FLL, FGC participant, FRC, FGC mentor and FGC Volunteer have been legendary. He has been an influencer in all our outreach events by setting an example. He routinely brings in students and professors as volunteers to support at FIRST events. He has made R Factor an integral part of his college tech-fest 'Technovanza'. He motivated me to address a crowd of 7000 engineering majors to speak about FIRST. Thanks to him my confidence in communication and leadership skills leapfrogged.

Aadiv, you are an iconic mentor and I am inspired to continue your legacy. ■



## Woodie Flowers Award: Nilesh Shah



**NILESH SHAH**

*"You have brains in your head, You have feet in your shoes You can steer yourself in any direction you choose" – Dr. Seuss*

3 years ago as sounds of metal cutting, an array of tools, posters of play field, students typing furiously a code surrounded me, I was bewildered. Nilesh Shah lead founding mentor of FRC 6024 jumped to me and said "This is your home now... go do something different". "Phew! This seemed the place where I could be ME!"

Mr. Shah ensures that fun, freedom to experiment and flow of ideas is unlimited. He invests faith in our endeavours and is nonjudgmental. Sometimes we win and sometimes we learn. He never lets inertia set in. He enrolled to learn CAD along with us to facilitate in making customised parts which has been pivotal in making our design concept meet form and function. He makes us believe that our machine is a piece of art! Using parts like gussets, pulleys, springs, aluminum channels, he breaks complex designs into sub-assemblies and mechanisms so that rapid prototyping and testing is effective. To save time, money and resources he introduced us to operations management concepts like 5S, Root cause analysis, PDCA and Fish bone analysis, resulting in creation of SOPs and modular mechanisms. This immersive learning at a young age makes our thought process robust, disciplined and optimal. He taught us to take ownership and drive our team as a startup!

While travelling with him, I would discuss about building up FIRST community in India and he was a perfect soundboard for all my

ideas. No idea was too trivial for him and he always encouraged me to express freely and take it up as a challenge. This was my moment of self-discovery. My confidence, leadership, entrepreneurship skills have been honed by holding presentations of R Factor for corporates and at FIRST events aiding me to make a career choice. He instills peer to peer learning and organically all of us get involved where academic trajectories are a byproduct. Our team accolades, two girls winning the Dean's list and Co mentors winning the Woodie Flowers at regionals are shining examples of his able leadership. He is the biggest cheerleader of FIRST as FLL, FTC judge, FRC, FGC mentor, FGC global diplomat. To Promote Connect and Integrate FIRST programs, he started FIRST FACILITATION CENTRE, the epitome of cooperation and Gracious Professionalism!

He is a powerhouse of knowledge- full of compassion and respect, he guides me as a life coach. Beyond FIRST, I have imbibed his qualities of never thinking of the odds and to volunteer for a good cause relentlessly. He was in tears when a girl from the FLL team of underprivileged girls shared that her father gave up drinking alcohol to support her competition. Moved beyond words, he exclaimed "How beautifully FIRST blends humanism with technology! This is definitely more than robots!"

He has found his IKIGAI and we have found our ALCHEMIST! ■



**AARAV PARIKH**

*"The mind is not a mere vessel to be filled, but a fire to be kindled"*

One can only savour the chance of being with a bright young mind teeming with ideas to start the daunting task of FRC Regionals in India!

This is Aarav, who in his 3 years of FRC Program, has mobilized his experiences and enthusiasm to promote and integrate FIRST as a culture change in the team and himself. In his first year at FRC, he experimented by immersing himself in all sub-teams. He has been my constant companion in all outreach activities imbibing knowledge about FIRST & its philosophy. The confidence and articulation skills that he acquired made him a natural choice for our chairman's team ever since. Learnt and applied pneumatics for our team. He is fluid in switching roles from an avid learner to heading the control systems team. He trained our team apprentices this season to teach them electrical systems to enable them to take the ownership next year. Wiring the I2C bus he designed a PCB to create a neat

and systematic electrical circuit minimising chances of failure. Having completed 160 hours of SolidWorks industry certification, enabled him to create a robot simulation for testing the robot code and modelling power cell (game element) shooting. While writing the Chairman's essay, compiling the video contents or ingraining peer to peer learning his presence is kinetic. As he takes ownership of the team, he assists in organising the team structure, including the sub-teams, and methods to test team members to take up responsibilities.

My vision of having all FIRST programs under one umbrella had a profound impact on him making him restless. He got the pulse of and the necessity to plug gaps like lack of resources and knowledge required to sustain FIRST programs. He was most excited when our team unveiled the FIRST FACILITATION CENTRE. He put our team on Google maps thereby promoting our mission. Under the FIRST FACILITATION CENTRE initiatives, he helped Team 6813 and Team 7539 in electrical systems and CAD, conducted mock FLL interviews and prepared FLL FAQs. His ubiquitous presence at FIRST events and 200+ outreaches makes him the face of the team. He addressed a crowd of 7000+ Engineering majors in tech fest to promote FIRST. His team spirit and growth mindset are the underlying ingredients of all his endeavours.

He plays basketball for the school team and he is the youngest Executive board member of his school Model United Nations. With

distinction in the Trinity Music exam and a finalist position in UPenn's Wharton investment competition, he is adept in time management and academics. Using the skill of programming, marketing and web designing that he learned at FRC, he makes websites for businesses. Money made from this is donated for animal and child welfare. Along with 2 of our team members, he mentored FLL team of hearing-impaired students and learned sign language to facilitate ideas. He mentored 20 young students for Jr.FLL along with 3 teammates. He helped 7 students in progressing from FTC to FRC. Experiences with the hearing-impaired and all-girls underprivileged FLL teams have sensitized him towards FIRST programs and has inspired him to start the Instagram #FIRSTWITHOUTBOUNDARIES. This has improved team credibility as we are spreading the message of culture change in STEM through FIRST.

Constantly looking for mediums to propagate the team's sustainability, he attends the Infosys Prize Foundation Event, meets members of parliament, chief ministers, makes presentations to schools and potential stakeholders of FIRST. His conviction in FIRST is organic as he fiercely advocates for its long-term benefits and the fun that is involved in hands-on learning. His independent thinking, learning, and a passion to pursue projects, fuels his entrepreneurial mindset. His interests lie in aerospace engineering and Fintech. Aarav is a first-class citizen of FIRST and will continue to champion the cause of culture change in STEM through FIRST India! ■



**JAI JARIWALA**

*"You give but little when you give of your possessions, it is when you give of yourself that you truly give"*  
– Khalil Gibran

This is the philosophy that Jai lives by! He has truly given himself to FIRST and all that it embodies. Being inducted into FIRST at a very early age, he participated in 3 seasons of FLL, where his compassion and sensitisation for real-world problems grew with every season pulling him out of his nerdy comfort zone. While seeking solutions for his FLL projects, he discovered how he could make a change that can potentially improve communities and lives. He used his FLL Project "Funetics" to teach phonics to underprivileged Children from the NGO "School of Life". His other FLL Project "Swachh Express" was presented to the officials from Indian Railways to explain an innovative system of waste collection on trains. Another of his projects "Road Sepoy" attempts to identify potholes on the streets using a vision-based tracking system and MATLAB algorithms making this data available on Cloud

to the Authorities to prioritize road maintenance.

A long stint at FLL helped his transition to FRC. Jai was one of our youngest founding members when he joined in 2016. An integral part of our construction team since 4 years, his knowledge of SolidWorks makes him a natural choice to lead our CAD & Construction team. While spearheading the construction team, he developed a reliable collection & storage system for the power cells (Balls) and a high speed 3DC Motor drive gearbox. He readily helps our rookies with CAD and to enhance their construction skills. His ingenuity in creating parts has boosted the confidence of the team. Jai displayed cooperation by helping team 6813 make their robot for the FRC 2019 season.

Jai's technical expertise is beautifully complemented by his creative side. At FRC-2018 he wrote the lyrics, sang and featured in "Mans not Safe" a parody on safety. As a part of the Safety team, he made a video winning the runners up safety animation award. He effectively manages his time pursuing other hobbies like music and sports earning him a slot in his school band and basketball team. He showcased his entrepreneurial skills as a finalist at UPenn's Wharton Investment competition.

Jai uses every opportunity to spread FIRST. He has effectively contributed at all team outreaches. He was invited to the Infosys Prize Foundation event where he could interact with Nobel laureates and industry leaders. At the a tech-fest of Mumbai's oldest engineering college he conducted chassis

building workshops for 100 FIRST enthusiasts, using self-created documentation for various chassis used in FRC.

He volunteers at all FIRST events and kick-offs and has encouraged 6 FTC participants to progress to FRC. This season, with 3 other teammates, he mentored 20 students for FLL Jr. It was a pleasure to see Jai break his shackles of shyness and bond with the FLL Jr. kids. He also conducted mock judging sessions with 11 FLL teams to prepare them for the FLL regionals.

Jai has been an influencer. As a member of the school student council, he inspires schoolmates to participate in science competitions demonstrating how to effectively use STEM skills. As more of his school mates took up FIRST, Jai's school recognised FIRST as a "Sport for the Mind" and felicitated students participating in FIRST.

Jai's passion for working with the underprivileged comes from his FLL days. He was a part of the Asha Foundation, Swayam and Angel Xpress projects where he taught maths & science at a school in a remote village. He raised USD 2K for the Akshaya Patra Foundation which provides daily meals to the underprivileged children.

A FIRST evangelist, Jai plans to keep growing with FIRST by continuing to volunteer, participate and mentor at FIRST and also pursue a career path in mechatronics engineering. A die-hard fan of Star Wars, Jai believes that FIRST is his Obi-Wan Kenobi (guide), guiding Luke Skywalker (him) into the Jedi (person) he is today! ■

Believe. Achieve. Inspire.

2019-2020

**FIRST**<sup>®</sup>

**RISE**<sup>SM</sup>  
THE FORCE IS BUILDING

