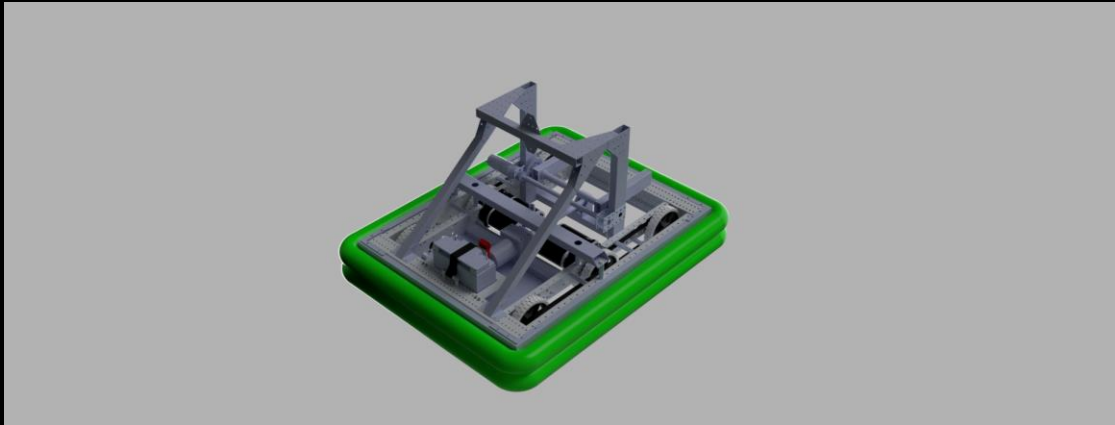




8159 GOLDEN HORN
JUDGES BOOK

DRIVETRAIN

Robot deliberately within a few inches of each sizes. Thanks to this small footprint greater maneuverability in the field, short stature allows us to ride under and make us go under the target whichever direction it bends, its scale.



Modular building system of the robot allows us to repeat quickly and efficiently all season long. Sub systems integrated as possible quickly removed and replaced, so that makes each easily upgradeable.

PROGRAMMING

This season we developed various special products programming tools to help autonomy; and It facilitates the work of our driver. Turning and orbit code of the robot location and speed hundreds of times per second.

ELECTRICAL

Via cable channels we hid the cables instead of kambas. We used PWM, pneumatic wasn't used in the process. As PG71 775pro drive-system, we used 4 cim motor. The list of what we used is:

- PG71
- 775pro drive-system
- PWM

- 4x cim motor
- VictorSP motor driver

SHOOTER and INTAKE

We were inspired by the escalator for intake mechanism. We used the following materials when making this robot:

- Bearing 15mm
- 2x 1.5 Module gear 50T
- Small gear 20T
- PG-71 .

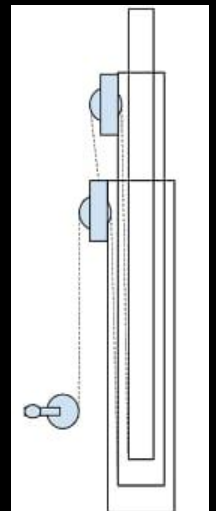
In intake, we use 2 gears such as roller bearing, 15mm shaft and 2 1.5 modules, 1 large gear and 1 small gear. The intake system, which is supported by the PG-71, rotates the small gear and the leading large gear rotates with power from the small gear without being connected to any reductor. Our shooter and intake system are same. It is one of the proof, this system is useful for Infinite Recharge competitions.



CLIMBER

For climbing mechanism. We used the following materials when making this robot:

- pvc pipes with 50-40-32-25 diameter
- a hook
- pulley 30
- 16.1 banebots reducer



- mini cim motor
- 2mm rope

Our climbing system is telescopic climbing, we are connecting 50-40-32-25 diameter pipes and attaching a hook to the end of it, we realize that the reel is connected in each pvc pipe, 2mm parachute rope passes through the rollers and this parachute rope movement is done through the mini cim(grass) motor and 16: 1 banebots reducer. provides power.

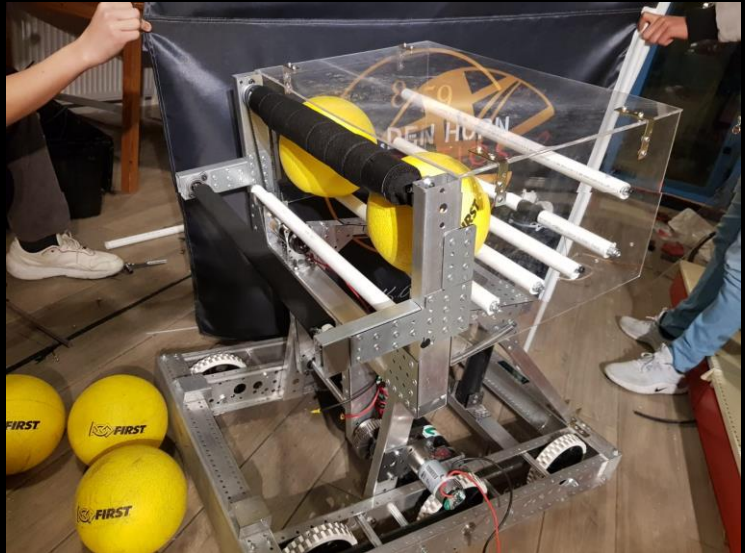


DESIGN PROCESS



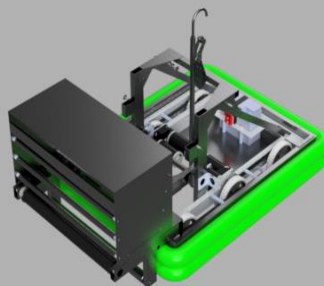
In the design of the robot, we gave the parts we have designed and we have purchased from the industry, to laser cutting. We assembled the parts from the laser cut and created the skeleton of the robot. After the intake part We used plexy, PVC pipe, roller, casing, churro, roles. Our first step in intake was to pass the churros through the pvc pipes, and then, after joining these pipes, we got a cube. Then we started assembling the arm. We passed the shaft between the frame we created in the assembly of the arm and fixed the shaft to the frame thanks to the bearing. After that, we fixed the shaft with two profile bolts. we put a big gear next to the profile on the left and fixed the PG71 motor next to the big gear. we put small gear on the shaft of the motor.

We the set screw hole drill on the gears and fix it with the set screw screw. We combined the laser cut parts and then we finished the assembly of the arm and we joined the arm. In order to fix the pipes in parallel, we first connected the bearings, we passed the shaft between the bearings, and covered the PVC pipe with a roller on



the shaft. We cut the boats of different sizes, which we bought for use in climbing up to the size, fixing small wheels to their ends and passing the rope over the wheels, and attached the end of the rope to the shaft of the PG71 engine. We fixed the hook to the end of the uppermost pipe. For design we used the following materials:

- 25x25-50x25 Profile
- 6mm Bolt
- 6mm Nut
- Shaft
- Stop Pin
- Ball Bearing
- Plexy
- PVC Pipe
- Roller
- Churro
- Gear
- PG71



OUTREACH

As 14 students from different schools we found each other via our common interest in technology & science and worked passionately to spread STEM in each of our schools. We always made an attempt for inspiring young STEM enthusiasts: we presented our team, our passion and goals to the children of LC Waikiki employees. Also, we have always helped our FLL team and gave our full support when they were in need.



Despite the fact that this was our first year, we made countless connections with sponsors, engineers, company owners, other theme mentors and students. We built a huge network around us that guided us successfully through our first year which was extremely hard and fun at the same time. We helped to set up the field in Mersin Off-Season where we won the **“Highest Rookie Seed Award”**.





Our team has been joining multiple business conferences such as “MZV” and “YGA” to strengthen our connections and make new ones.

We wrote the first ever *Turkish Wikipedia* source about *FIRST*. Furthermore, our team finds a great importance in being in touch with other teams so we created a Discord group with all LA regional participant teams.

FIRST Robotik Yarışması

Wikipedi, özgür ansiklopedi

Bu madde Wikipedi standartlarına uygun değildir. Sayfayı Wikipedi standartlarına uygun biçimde düzenleyerek Wikipedi'ye katkıda bulunabilirsiniz. Gerekli düzenleme yapılmadan bu şablon kaldırılmamalıdır. (Şubat 2020)

FIRST Robotik Yarışması (FRC) uluslararası liseler arası robotik yarışmasıdır. Her yıl, lise öğrencilerin takımlar, koçlar ve mentorlar, altı haftalık zaman diliminde 56 kilo ağırlığında oyun oynayan robot inşa ederler. Robotlar topları hedef yerlere atmak, diskleri belirli hedeflere atmak, barlara asılmak ve robotları denge girişlerinde dengelemek gibi görevler tamamlarlar. Oyun gerekli görevlerle her yıl değişir. Takımlara standart parça seti verilirken aynı zamanda kendilerine bir bütçe yaratıp özel parçalar almalı veya üretimine teşvik edilir. **FIRST Robotik Yarışması (FRC)**, **FIRST** tarafından düzenlenen dört yarışmadan bir tanesidir, diğer üçü ise **FIRST Lego Lig**, **FIRST Lego Lig Jr** ve **FIRST Teknoloji Yarışması**dır. **FIRST Robotik Yarışması** iki değer etrafında kurulmuş eşsiz bir kültüre sahiptir. “*Gracious Professionalism*” (*Duyarlı Profesyonellik*) programın doğasında var olan rekabeti benimser. Kötü konuşmak ve kavga etmek yerine empati ve saygıyı kabul eder. “*İş birliği*” takımların aynı anda hem iş birliği hem rekabet edebileceğini vurgular. Bu programın amacı öğrencilere bilim ve teknoloji lideri olmaları için ilham vermektir.

İçindekiler [gizle]

- Tarihi
- Bölgesel ve Sezon dışı yarışmalar
- Şampiyona
- Ödüller
- Oyunlar
- Önemli kişiler
- Kaynakça
- Bunlara da bakınız

Tarihi [değiştir | kaynağı değiştir]

2018 yılı, yarışmanın 26. yılıdır. 27 ülkeden 3.647 takımla birlikte 91.000 öğrenciden aşkın ve 25.000 mentor robot inşa eder. Bu takımlar 63 Bölgesel Yarışmada, 85 bölge eleme yarışmasında ve 10 Bölge Şampiyonasında yarıştılar. 800'den fazla takım iki FIRST Şampiyon turnuvalarına gitmeye hak kazandı. Sahadaki rekabete ek olarak takımlar ve takım üyeleri girişimcilği, yaratıcılığı, mühendisliği, endüstriyel tasarımı, güvenliği, kontrolleri, medyayı, kaliteyi ve programın temel değerlerini örnekleyen ödüller için yarıştılar. Çoğu takım, Amerika Birleşik Devletlerinde ikamet ediyor. Bununla birlikte

We get in together with Gültepe Robotics and made a campaign for our world. We used plastic bottle caps, recycled them and turned them to things which are more useful and also important like bowls for animals.



Our documentary about “Balat” a historical district which is located right next to İstanbul’s beautiful **Golden Horn** (the inspiration of our name) is now on the air.



Another project of our team was to organize a coding & robotics workshop with one of our sponsors' (*Netaş*) employee's children. We are looking forward to keep spreading the *FRC* spirit.



OUR SPONSORS

