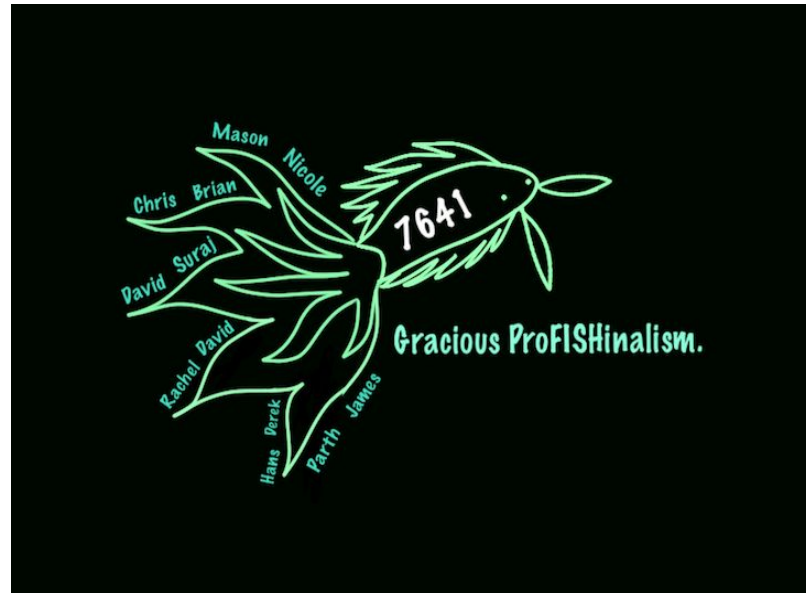


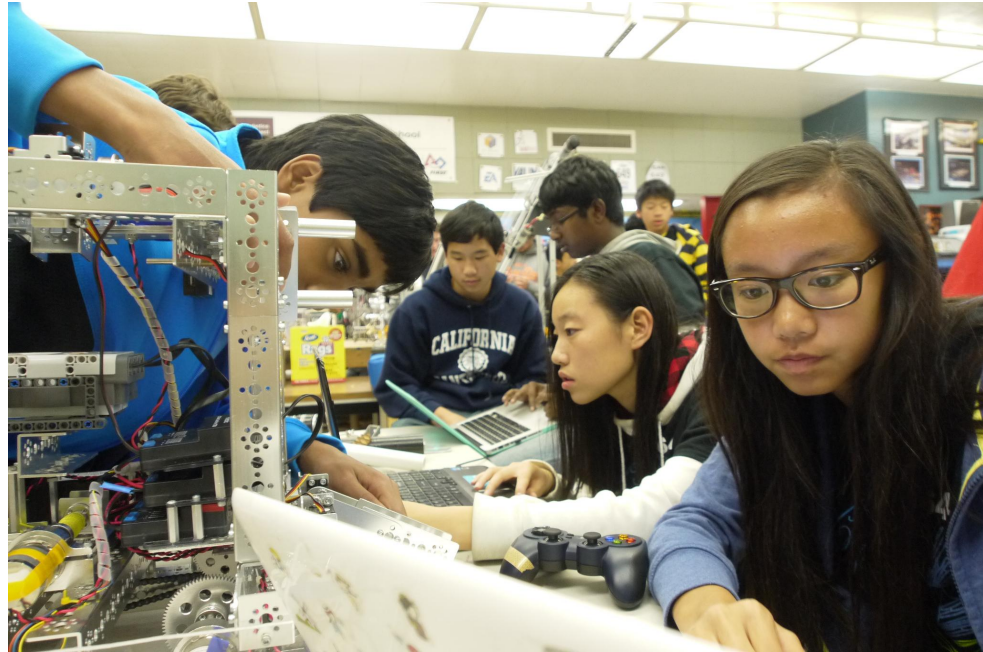
7641 Betta Fish

Saratoga High MSET



Our Team Philosophy

- Rookie, all-freshmen team from Saratoga High
- No idea is a bad idea
- Everyone has a chance to speak
- Equal consideration of ideas



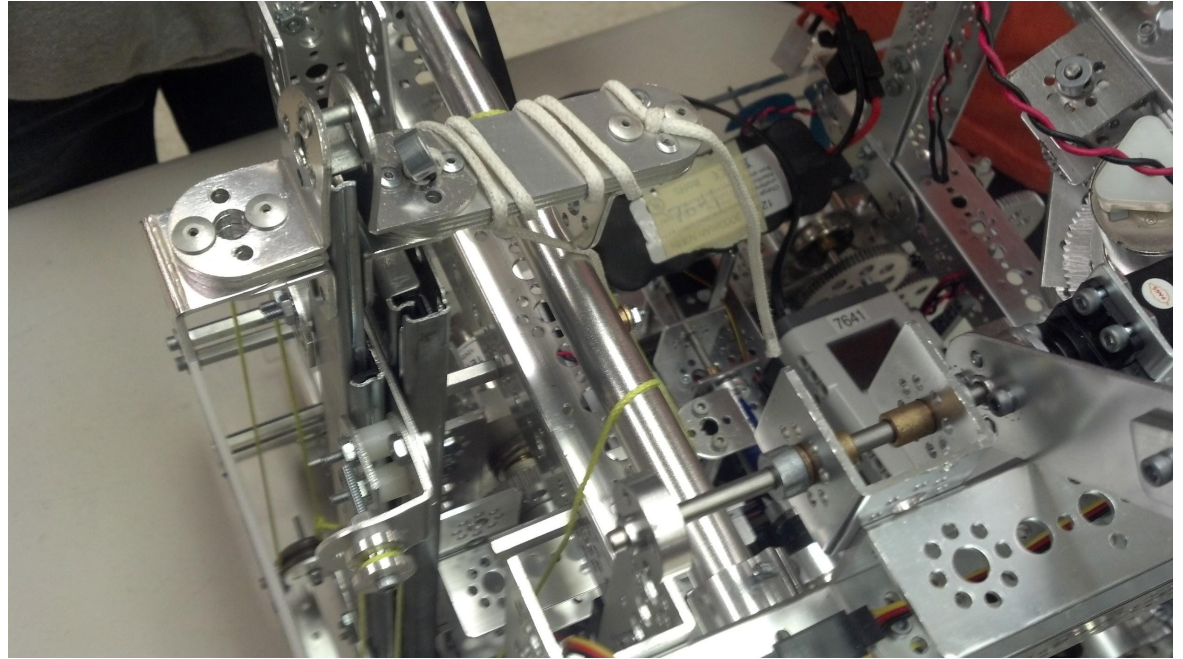
Drivetrain

- Tank drive
- 4 motor
- 2 chains
- 6 gears
- Maximize torque
- Single links



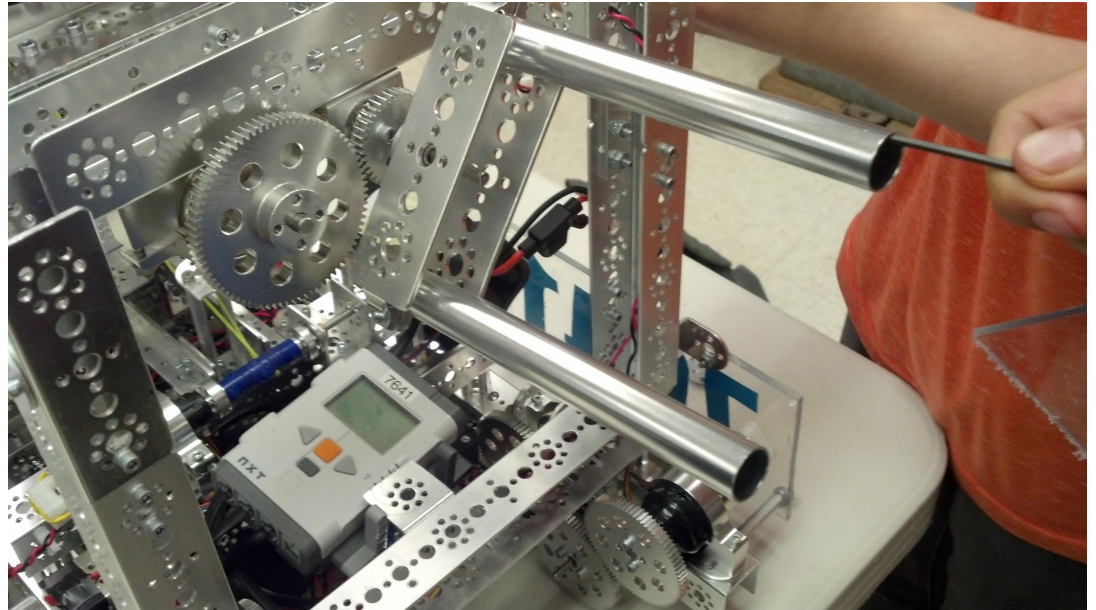
Pull-Up

- 2 sided-hang -
possible for double
hang
- Lots of string
- 2 motors
- 2 V-bearings



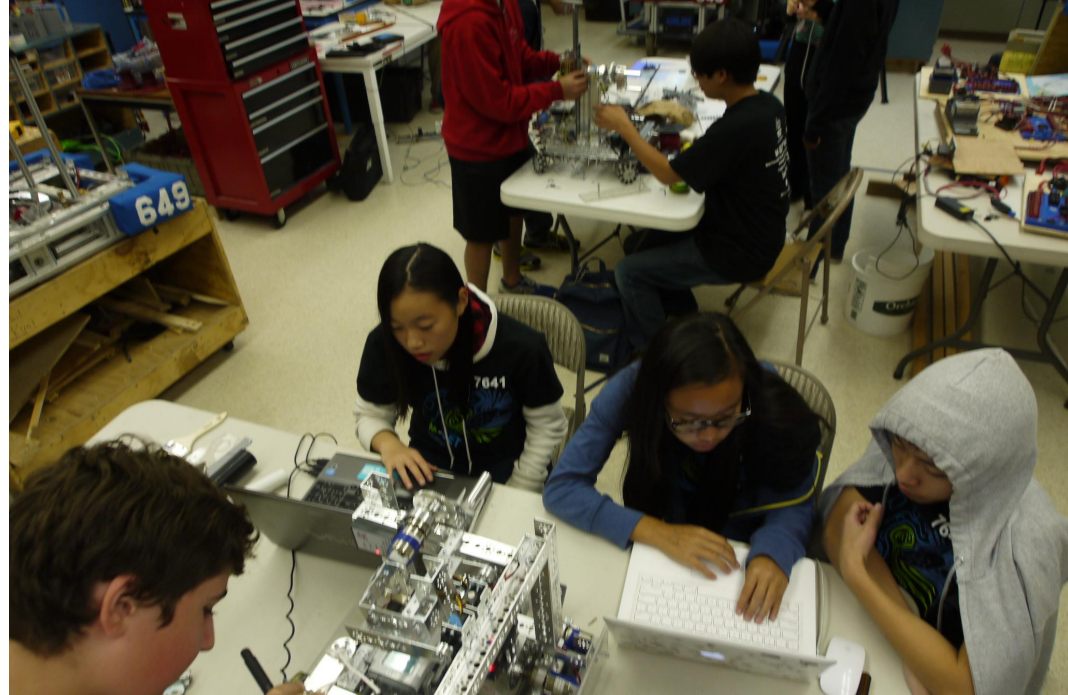
Flag

- Two gears
- 2:1 Gear Ratio
- Simple but effective
- Grips flag tightly
- Long reach
- Folds in during teleop



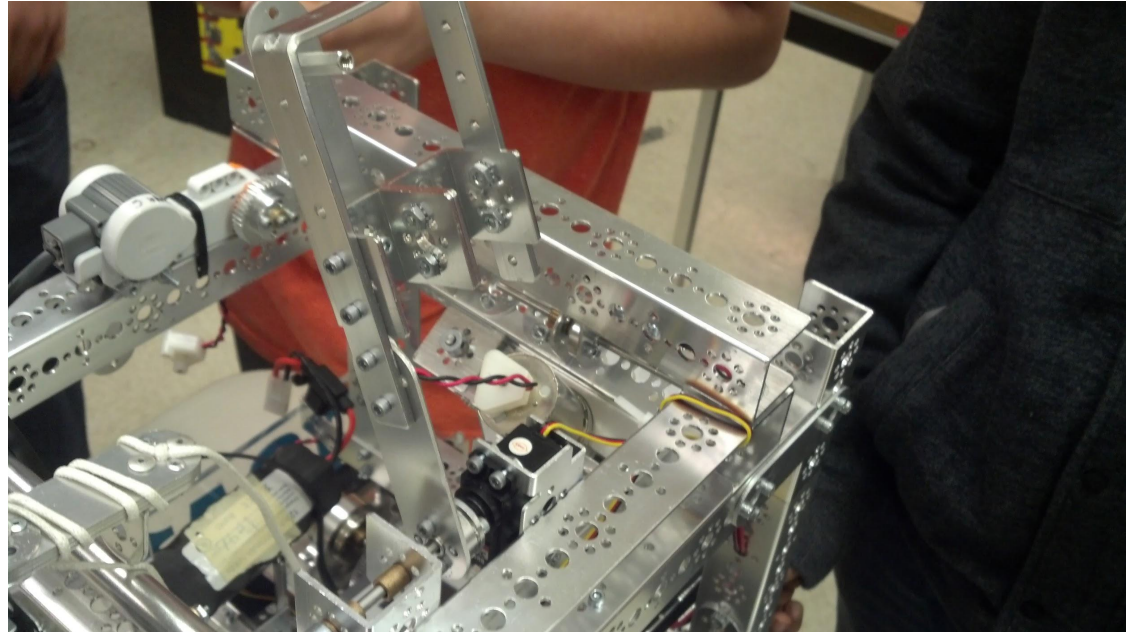
Code

- This is our first time coding
- Mentored by a local FRC team
- Different versions of code
- Completes all actions during autonomous period
- Use of encoders



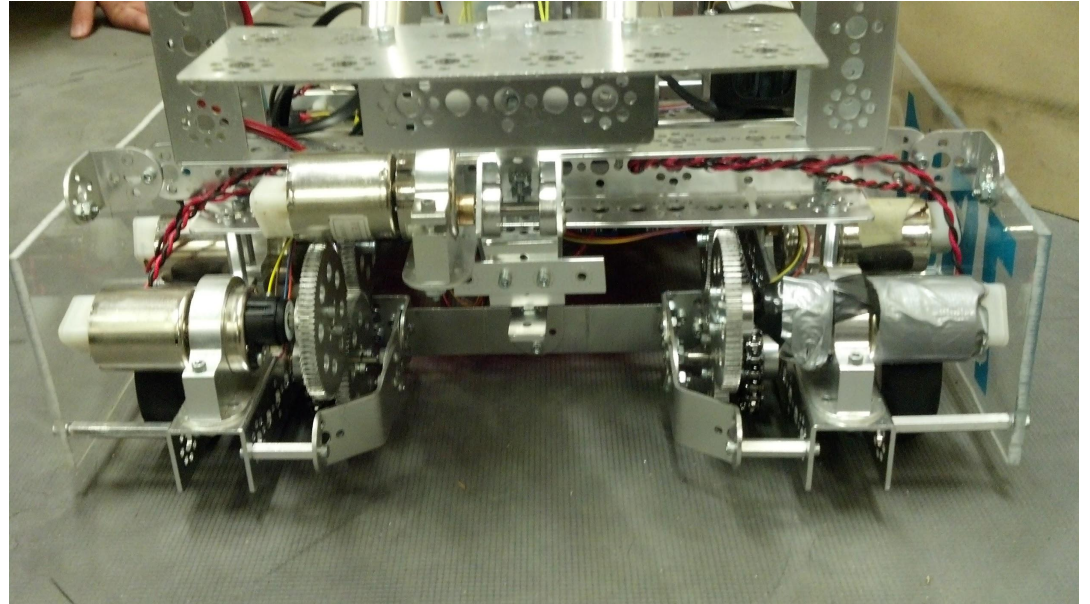
Autonomous Build

- One servo
- Designed to securely hold the autonomous block
- Deposits the block without problem



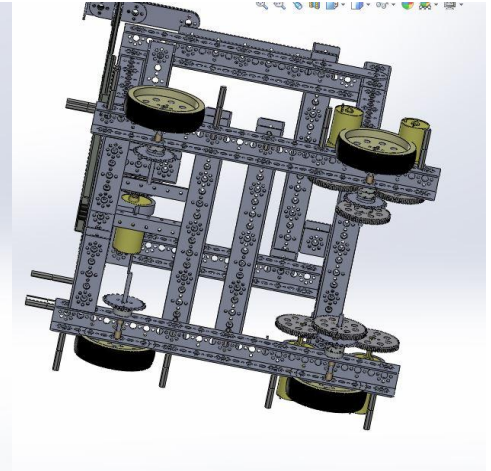
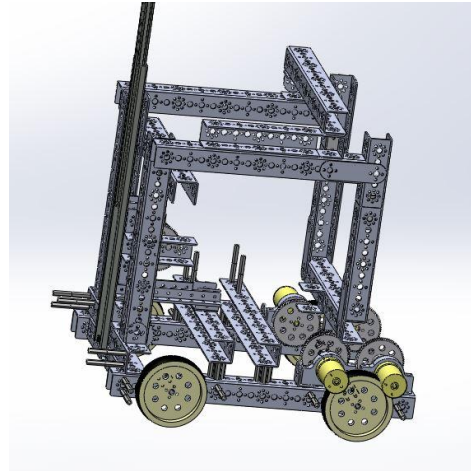
Bulldozer

- 1 gear
 - Can hold up to 4 blocks
 - Very rigid
 - Many adjusted tetrax parts
- parts



Computer- Aided Design

- First time CADding
 - Taught by mentors
 - Helped fit everything together
- together



Drive Controller



Forward/Backward

Right/Left

Auxiliary Controller

Flag (Clockwise)



Flag (Slow Clockwise)

Raise Flag

Bulldoze

Pull-Up

Flag (Counter Clockwise)

Flag (Slow Counter Clockwise)

The Future and Outreach

Future:

- Improve driver control
- Try a claw or a lift system for blocks

Outreach:

- We are planning an outreach with the local middle school
- We have hosted a tournament on November 23

Conclusion

We spent a lot of time on the build but we did not completely ignore any other parts of being a team. We tried many different ideas but settled on ones that worked with our drivetrain. In the end we chose ideas that were efficient and did not interfere with our drivetrain. We had to fine tune many different subsystems to get their full potential. We plan on reaching out to our community and continuing to improve the robot until it reaches maximum potential.