

Poly Rabbotics Team 7042





Purpose for Design

Section 1



Overall Purpose for Design

- ◉ Designed to play all parts of the game
- ◉ Focused on maximizing the amount of points
- ◉ Wanted to be compatible with alliance partners



Design Process

Section 2



Overall Design Process

- Form strategy for game during kickoff
- Start from individual ideas for components/mechanisms of the game
- Figure of merit chart
- Move to prototyping process



Conveyor Belt: Basis for Design

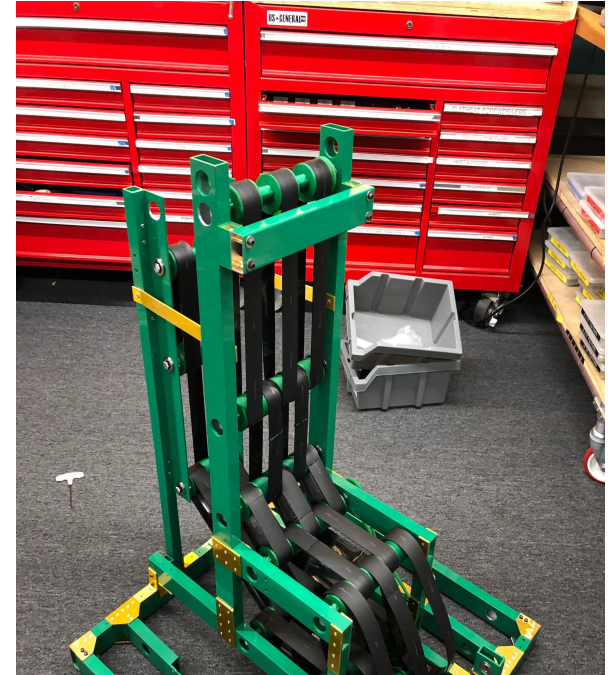
- Wanted elevated shooter
- Wanted storage system that holds 5 balls
- Wanted ball to follow straight path





Conveyor Belt: Initial Designs

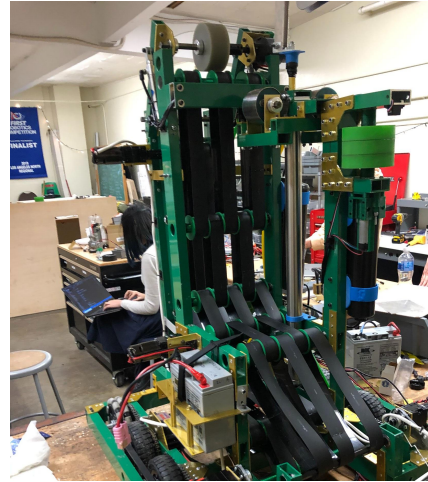
- PVC rectangular prism prototype
- One belt prototype
- Top have ran independently from bottom half





Conveyor Belt: Final Design

- Operates off of three motors
- Polyurethane belts stretched over 3D printed rollers
- Focused on storage and mobility for maximum scoring





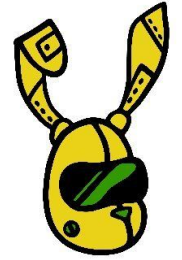
Takeaways

Strengths

- Holds maximum of five balls
- Balls have a linear path between intake, conveyor belt, and shooter
- Feeder cycles are efficient

Improvements to be made:

- New belts for more slack
- Autonomous Conveyor Belt



Thank you for listening!

