CS 5973
Project 3
Team 3
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Hardware Design

Components

- Two Encoders
- Two Bump sensors
- Two IR sensors
- CMU cam
- 2 Motors
Chassis Design
- Four wheel drive
- 5:1 gear ratio

Software Design
- Simple
- Multiple functions
- No multiple threads
Functions Used

- Move to closest block()
  - find closest object
  - moves to that object
- Find block()
  - Turns till track orange()
  - Orient itself for new direction
- Move to closest goal()
- Find goal()
  - Searches for the goal and drops the box
- Stage()
  - Used Encoders and IR sensors to align
Functions contd...

- **Break ()**
  - series of brake commands to stop robot from drifting
- **get distance traveled ()**
- **Swerve()**
  - turns to avoid the orange block
- **Track enemy()**
  - use location of centroid to ram the enemy
Success

- Able to detect boxes
- Able to detect nearest goal
- Able to drag it to goal
Improvements

- Avoid obstacle
- Kill enemy
- Find Block searched only when box was real close
- Failed to realign
- Detected other boxes while finding goal