

FTC CenterStage 23/24

ONS TEAM

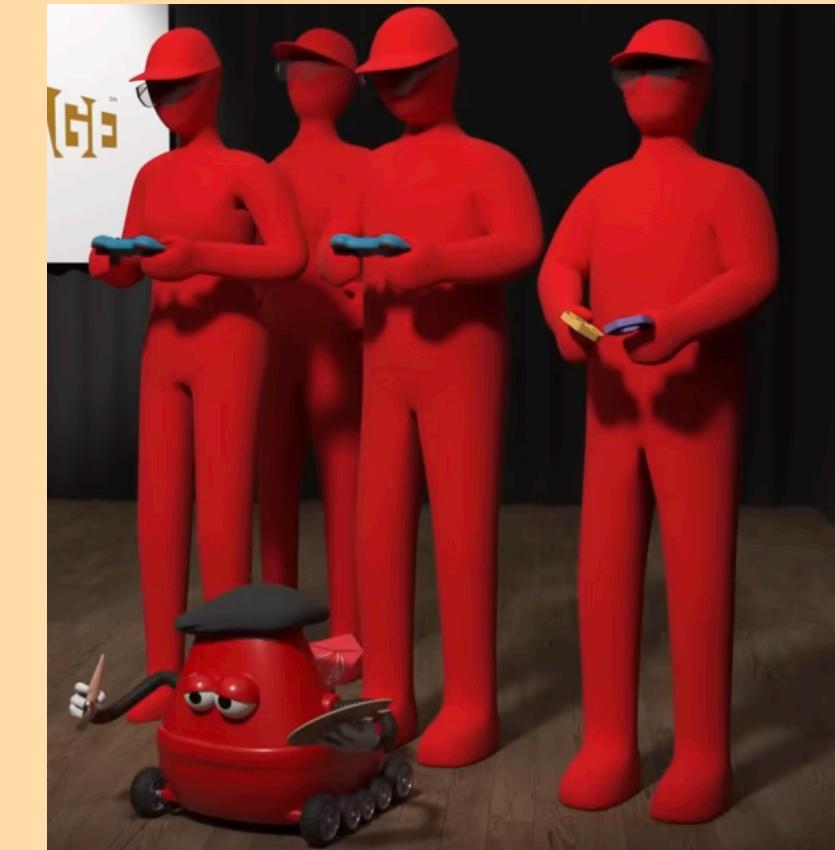


Inhoudsopgave

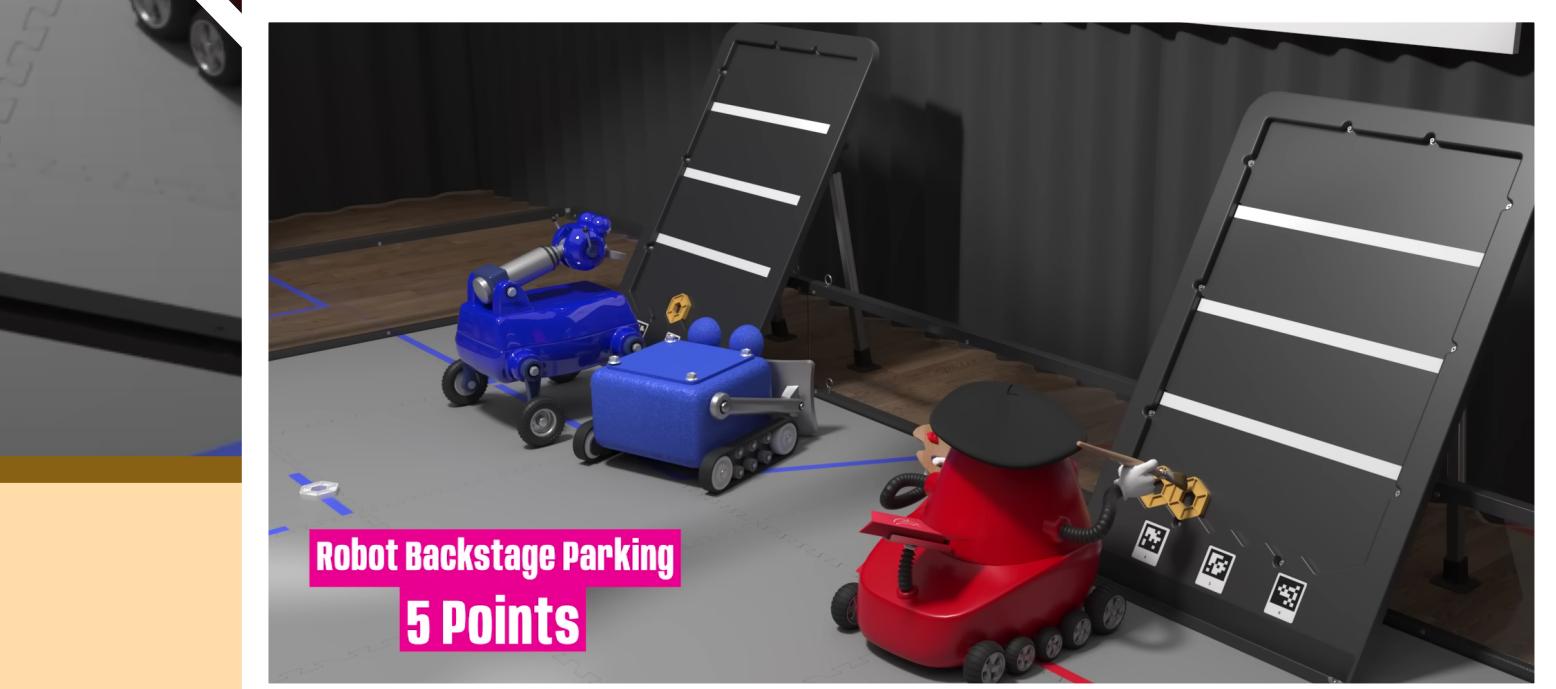
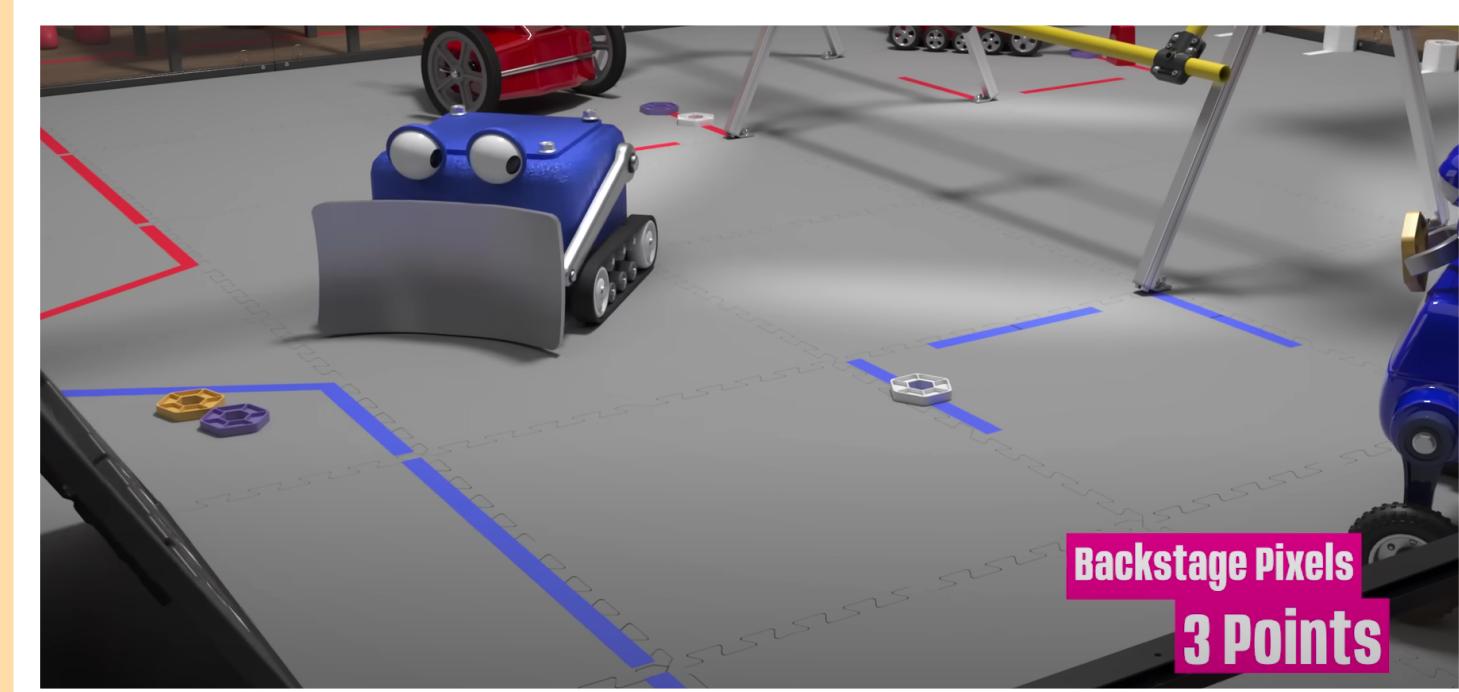
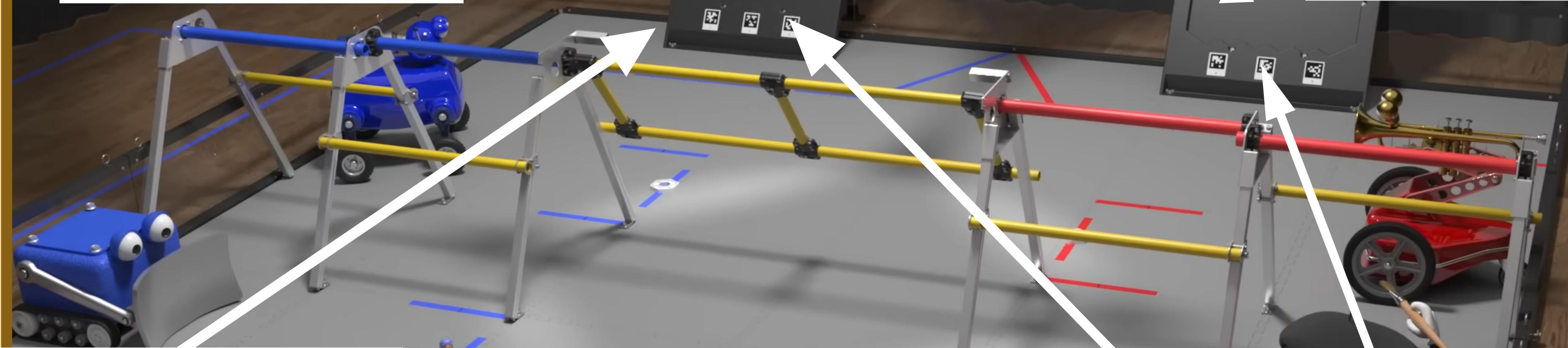
- Wat is FTC?
- Hardware
- Software
- Live demonstratie
- Einde

Wat is FTC?

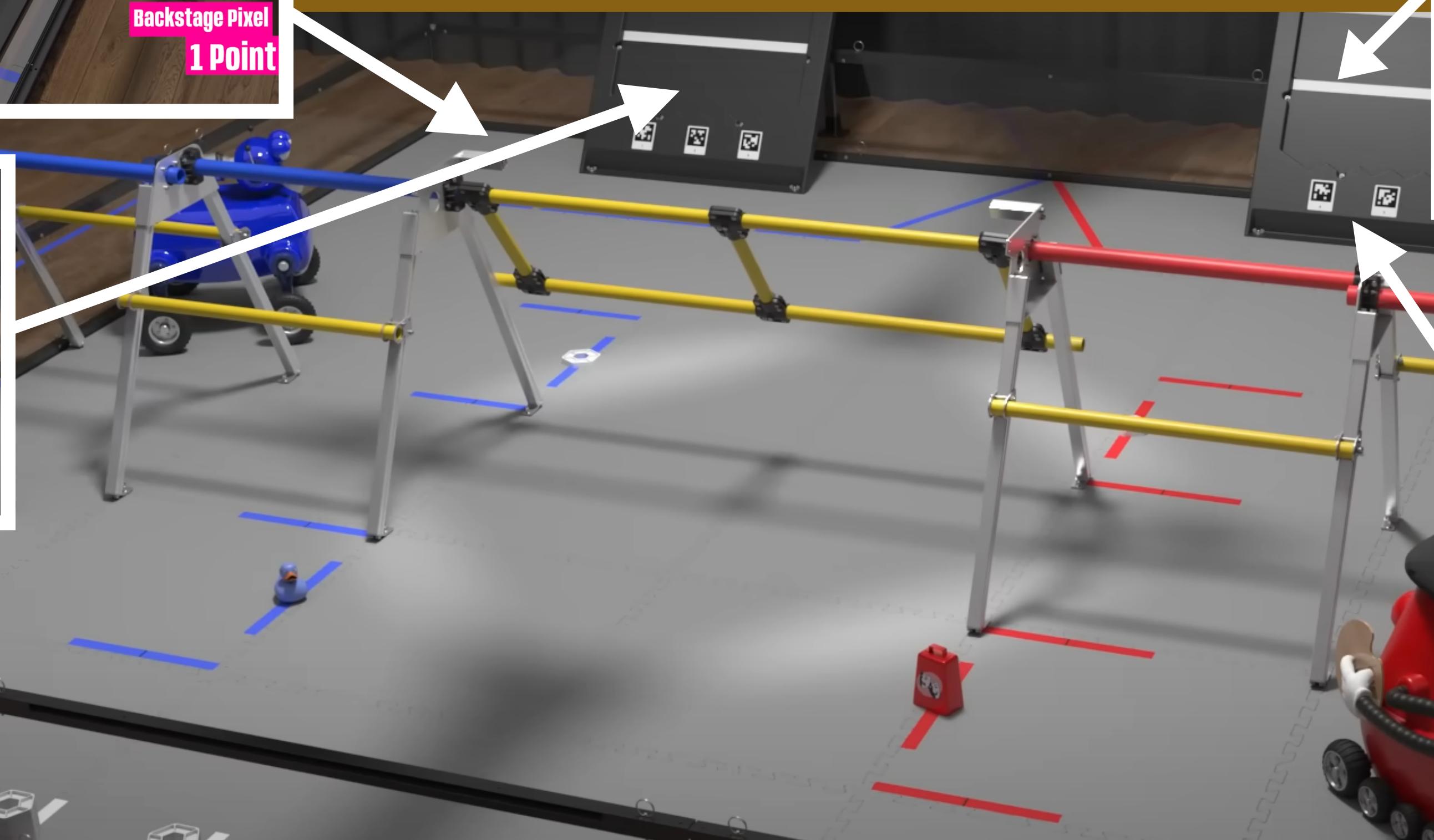
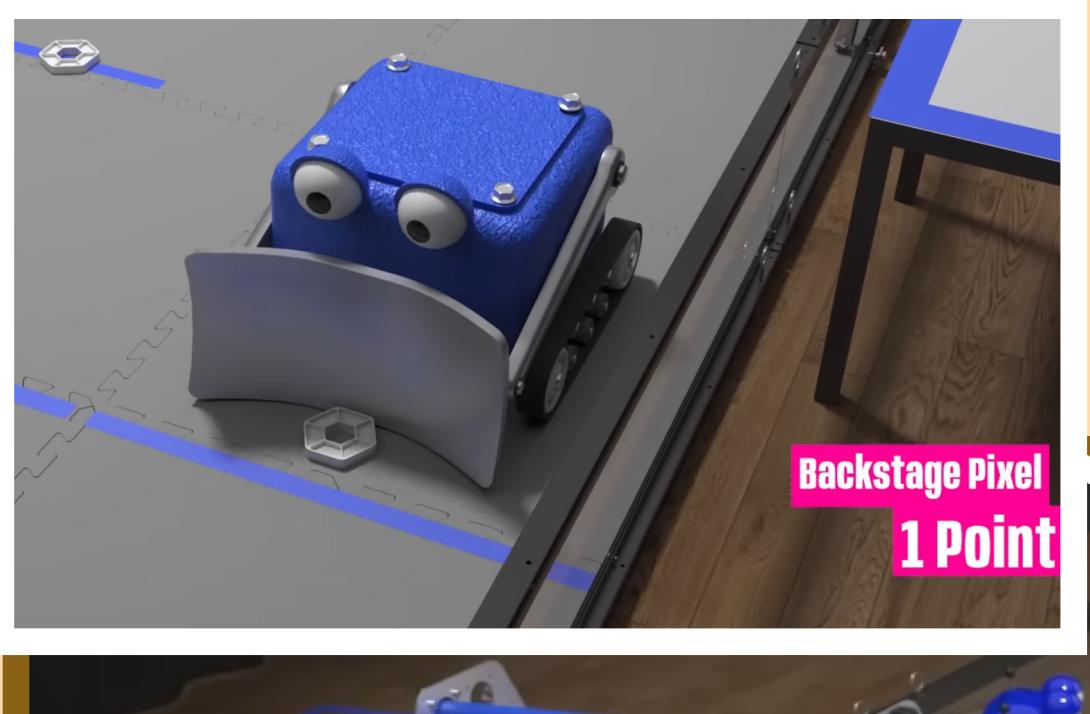
- FIRST
- Dit seizoen
- Onze strategie



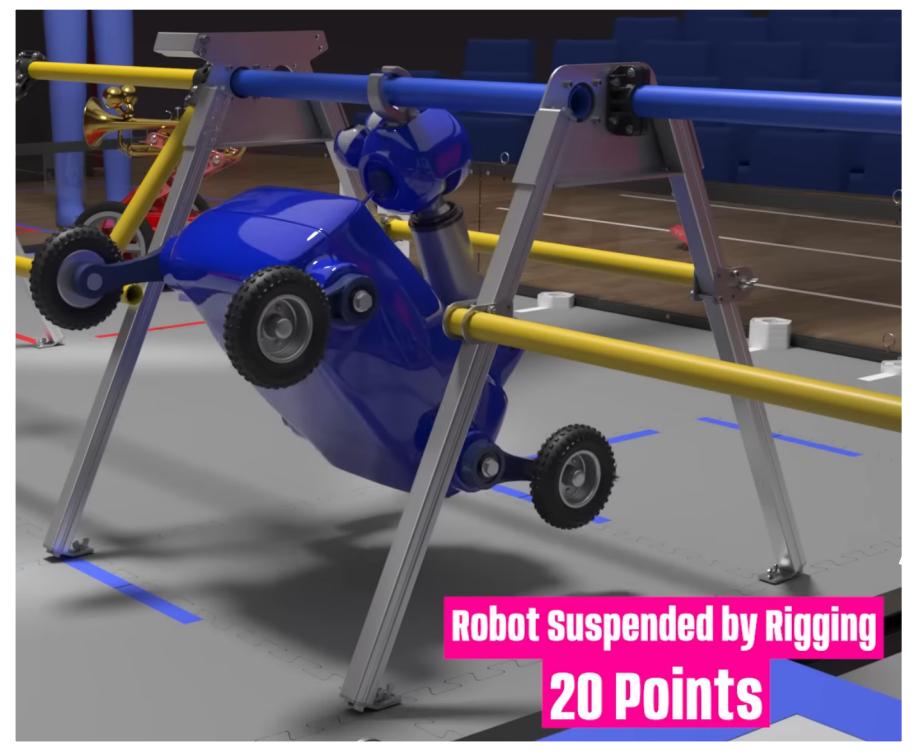
Autonomous



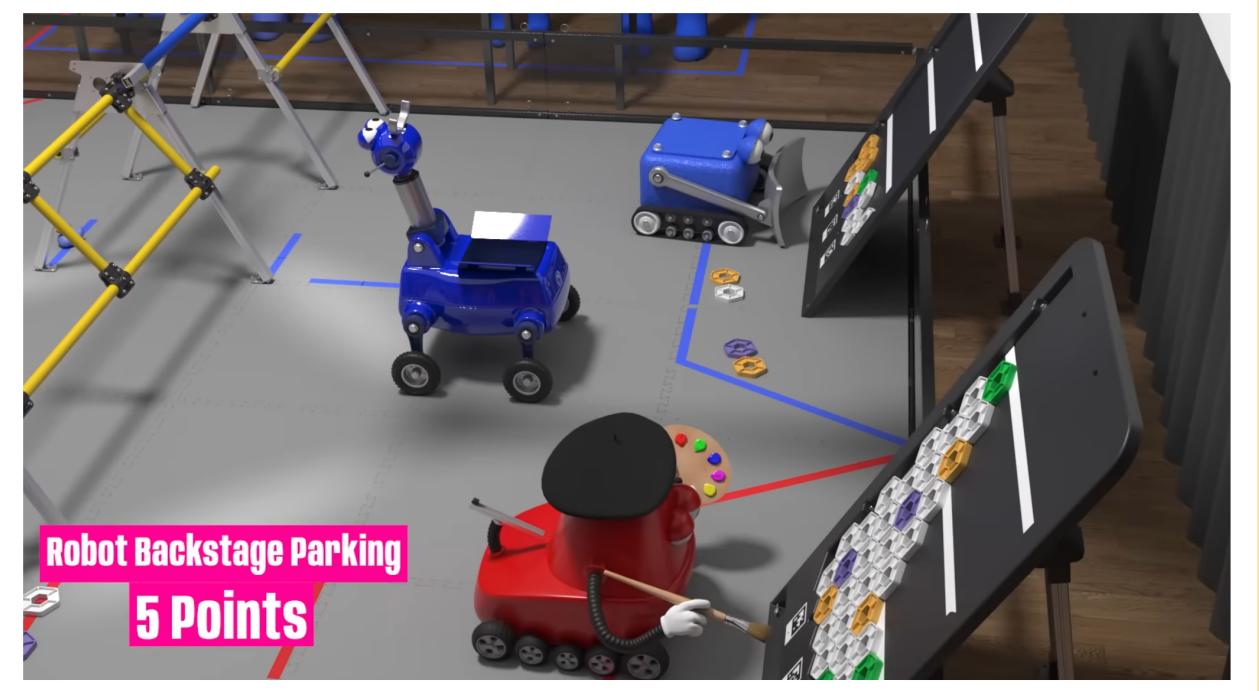
TeleOp



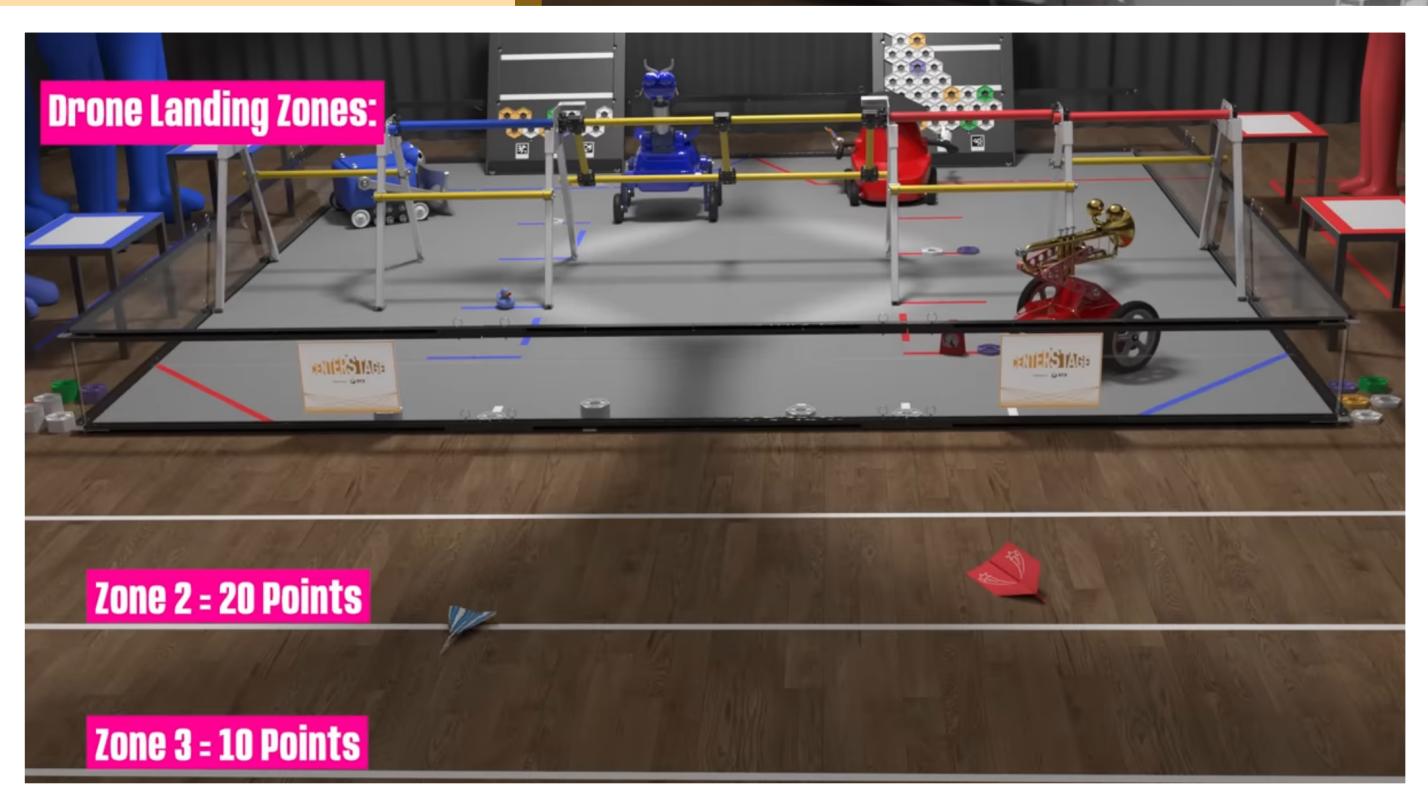
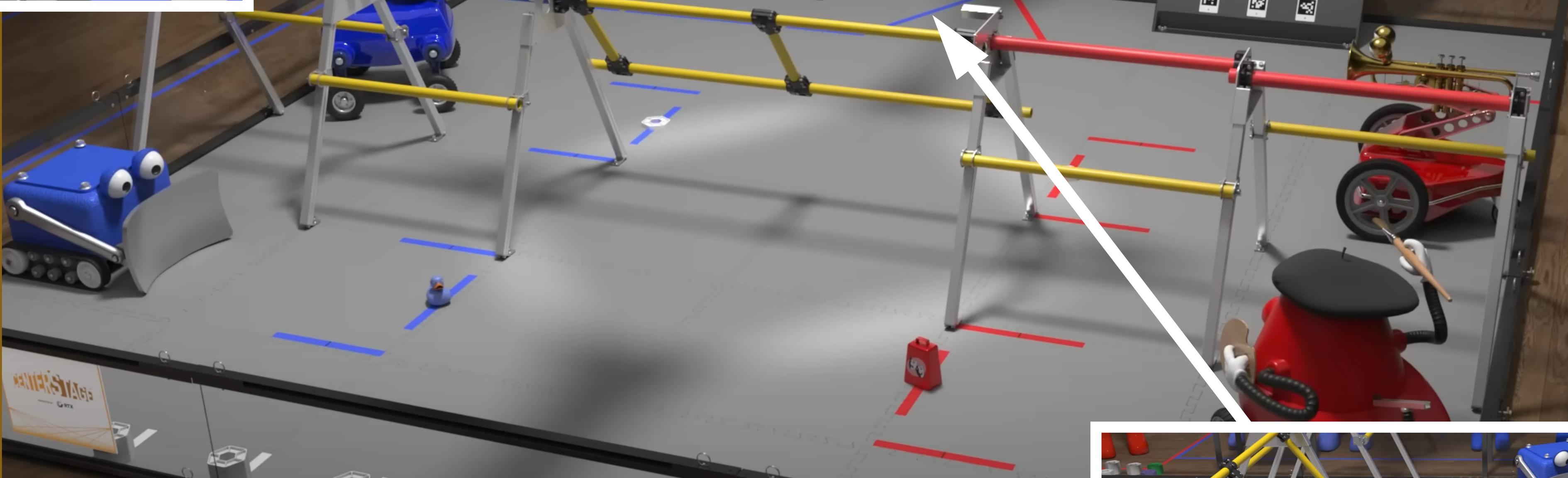
Endgame



Robot Suspended by Rigging
20 Points



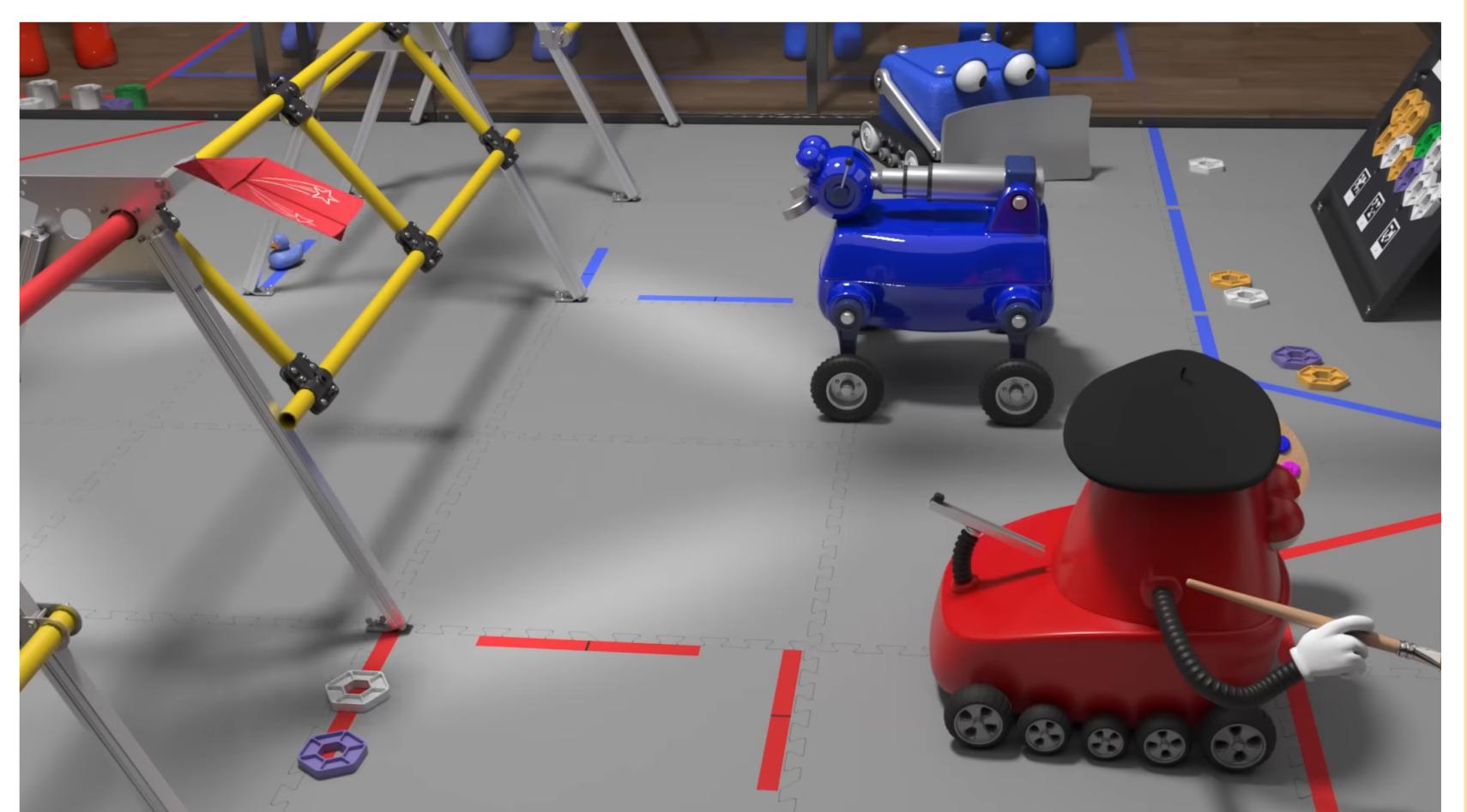
Robot Backstage Parking
5 Points



Drone Landing Zones:

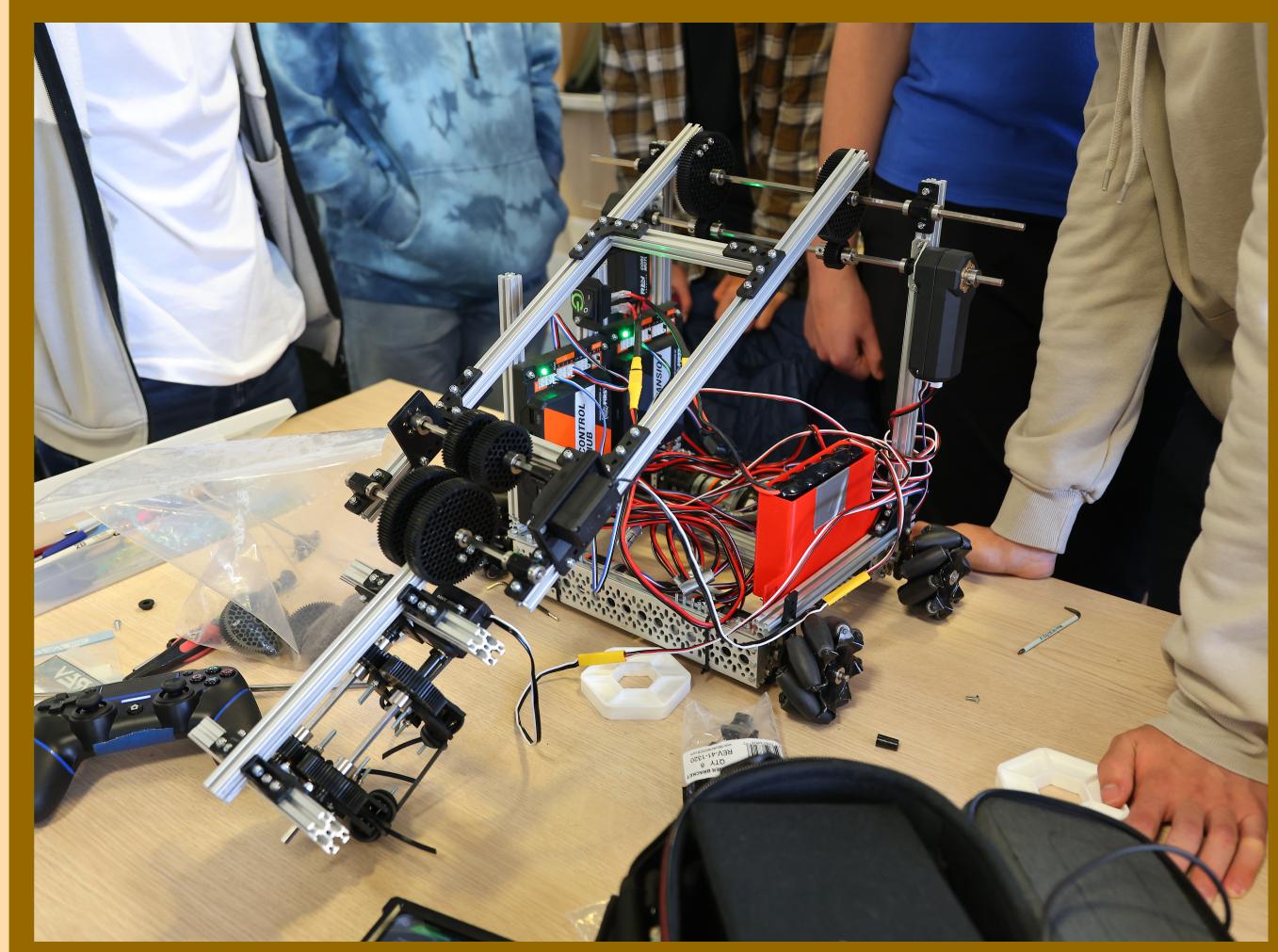
Zone 2 = 20 Points

Zone 3 = 10 Points

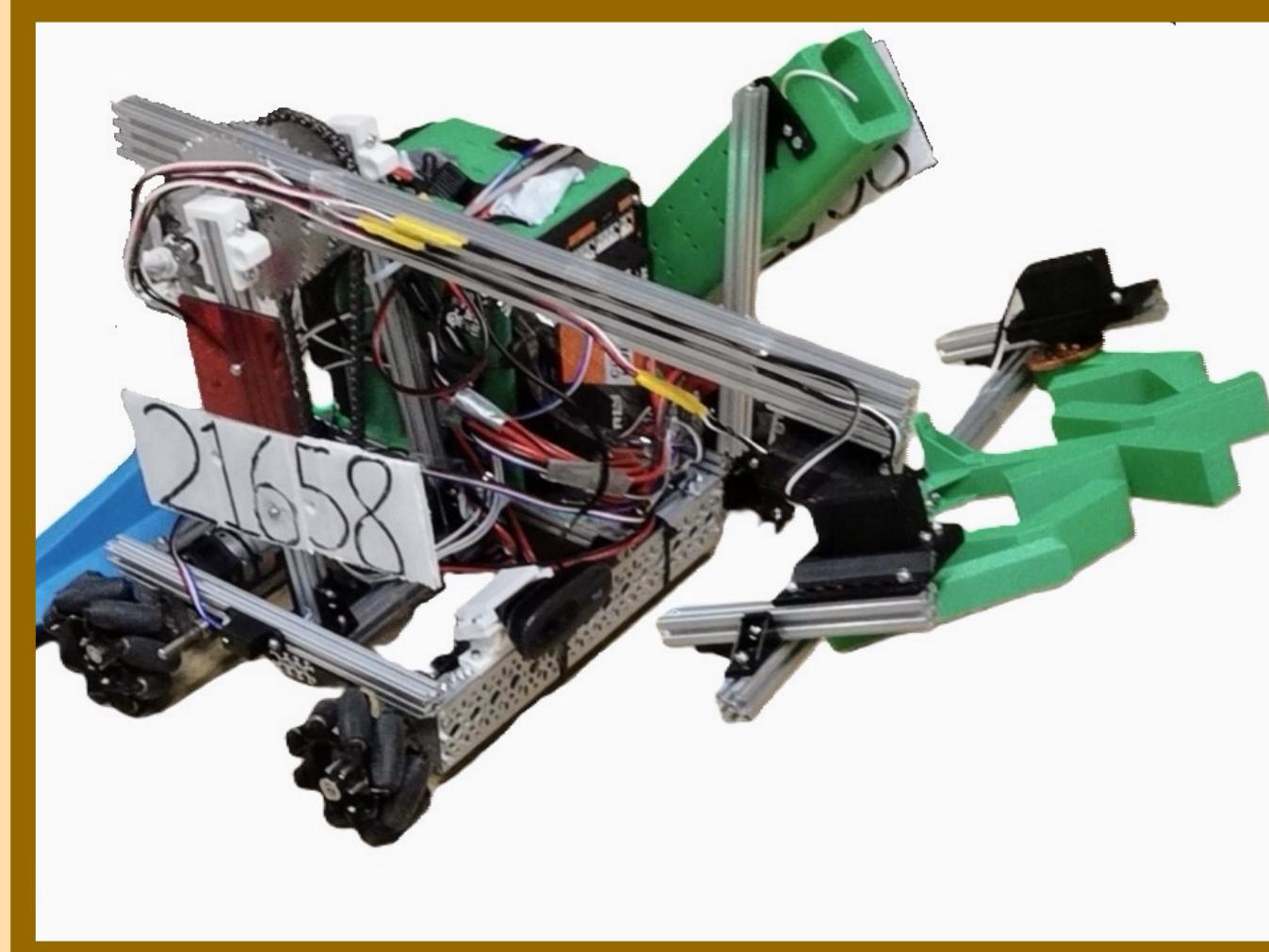


Hardware

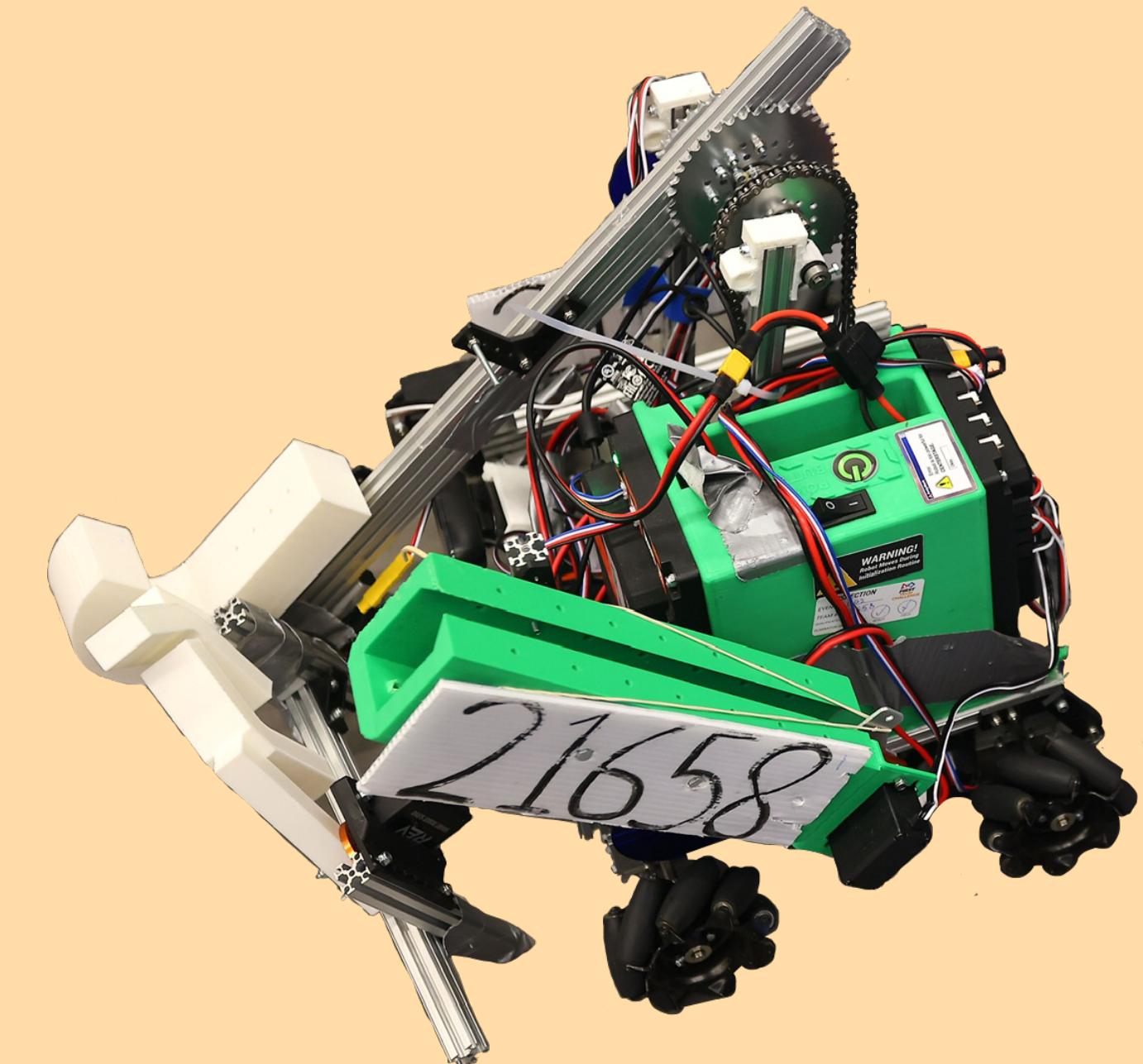
Verschillende versies



1



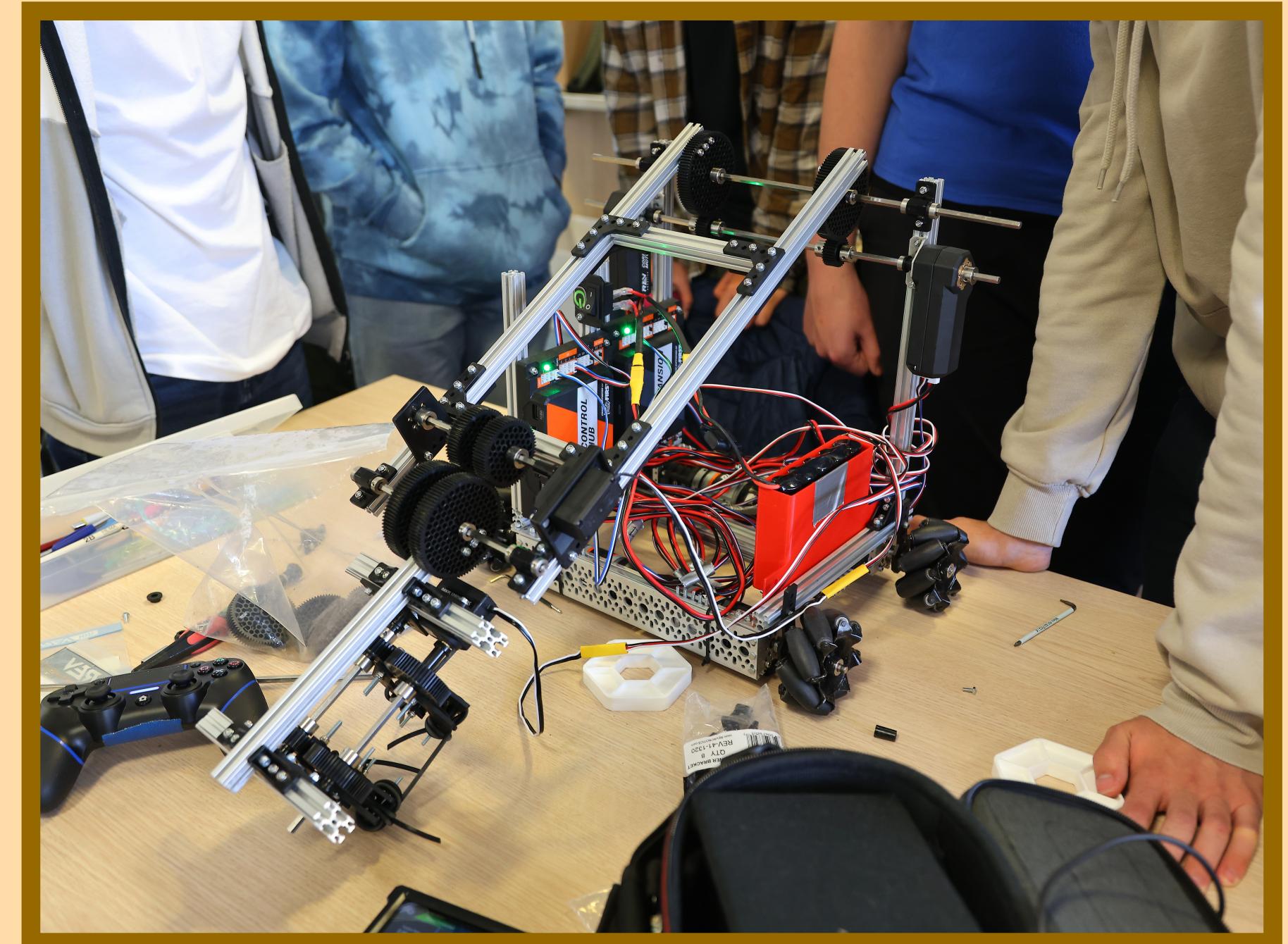
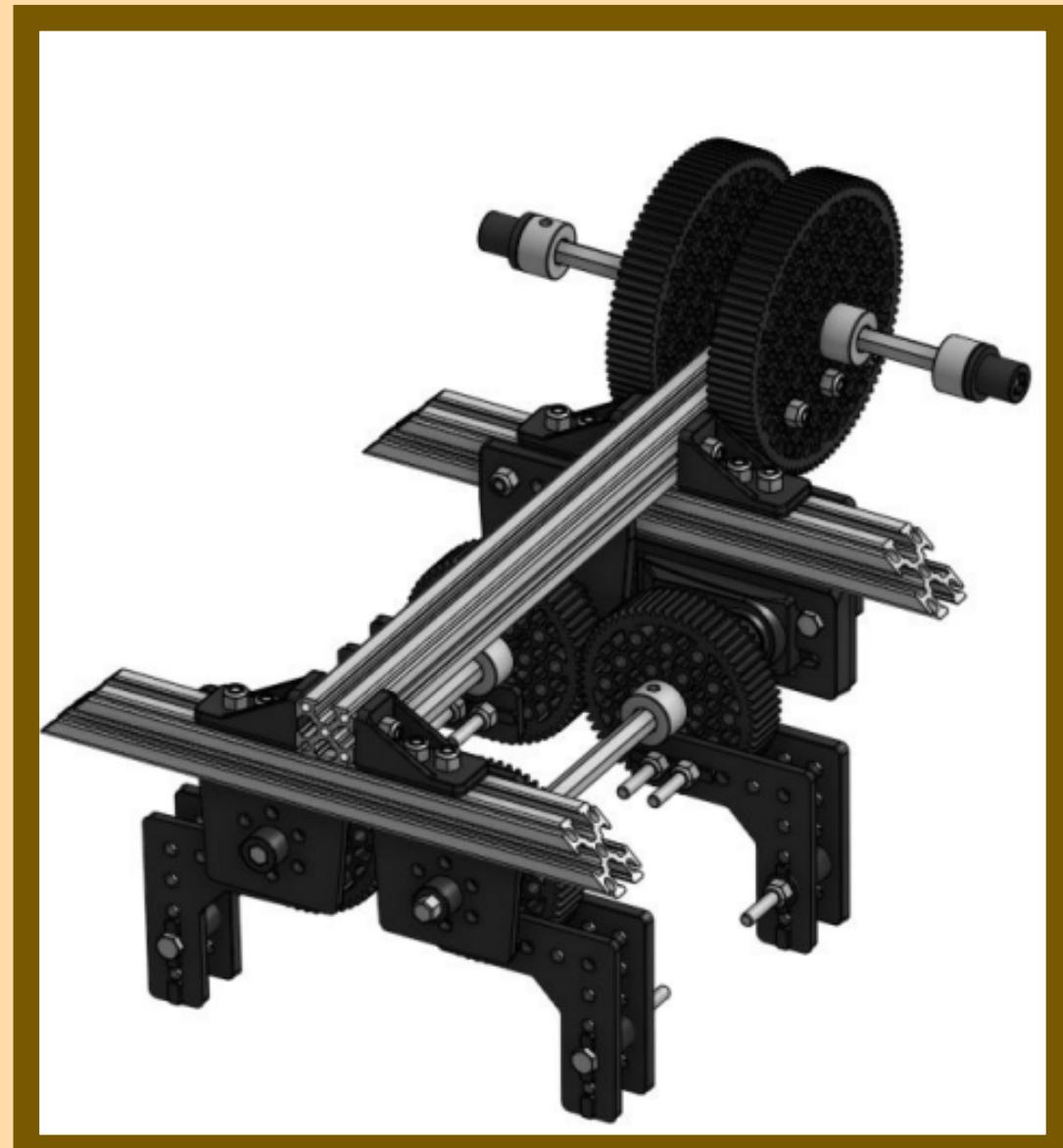
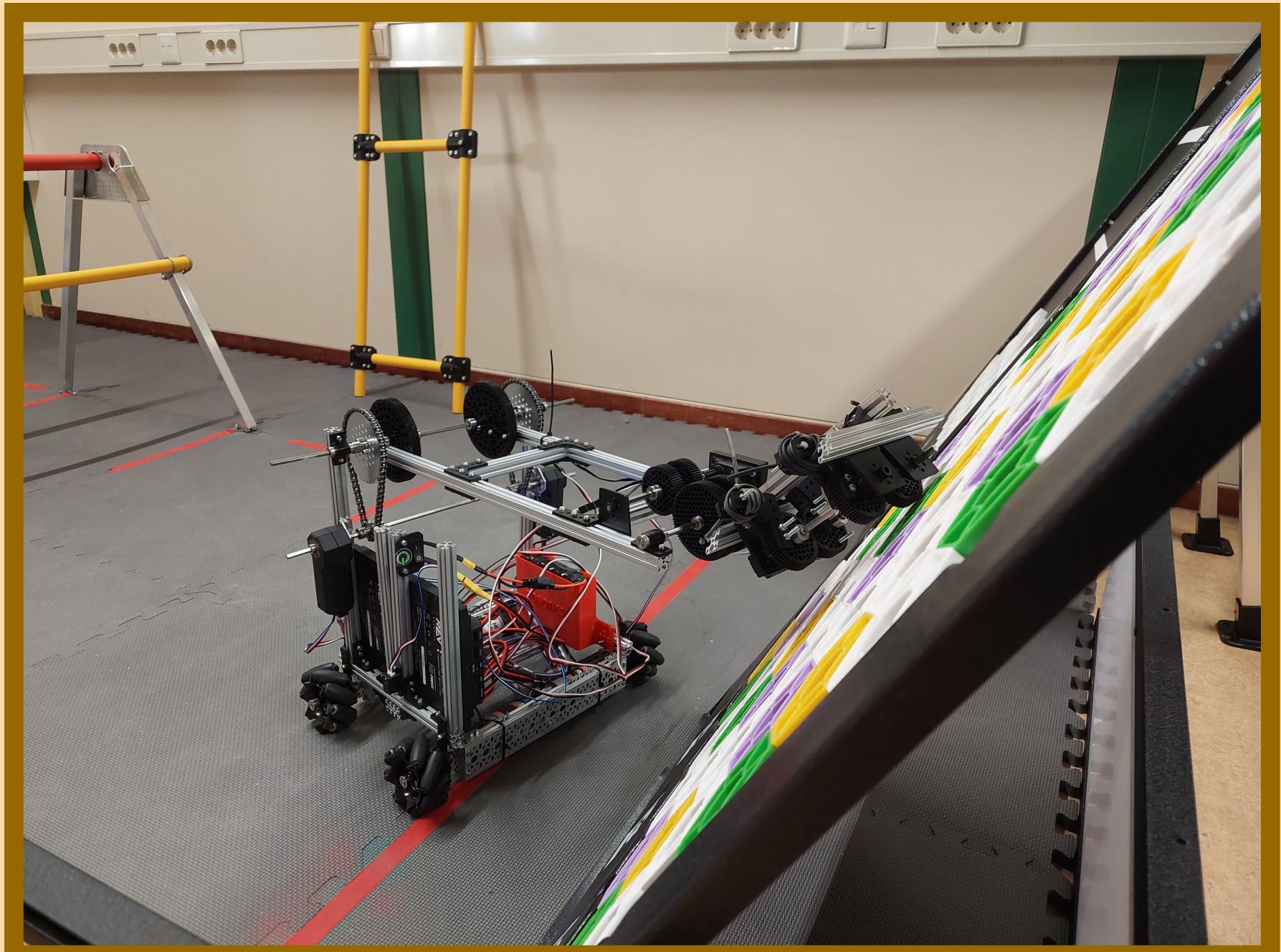
2



3

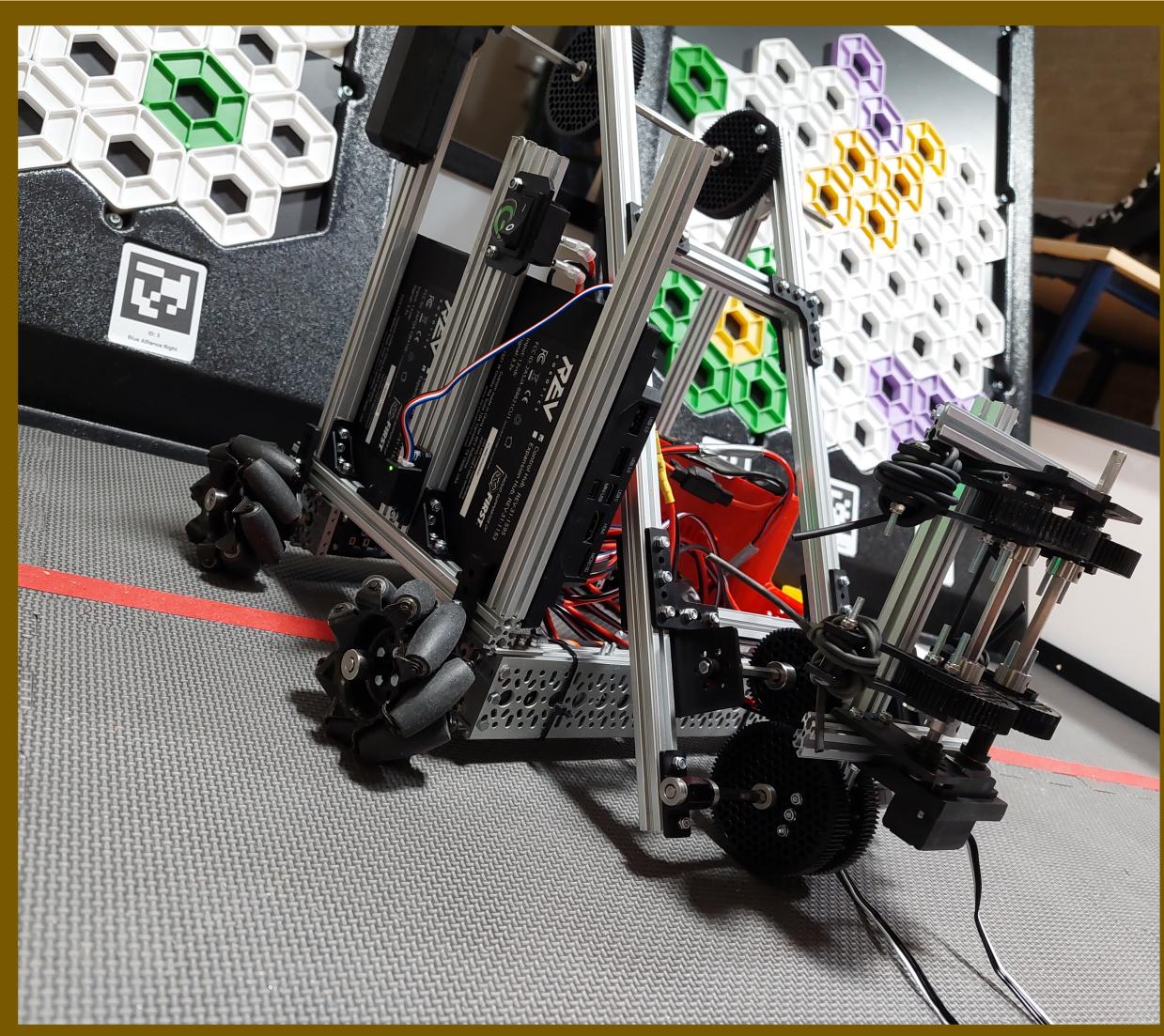
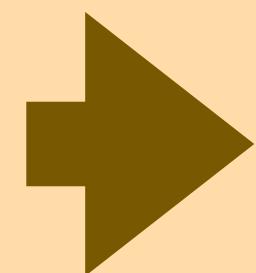
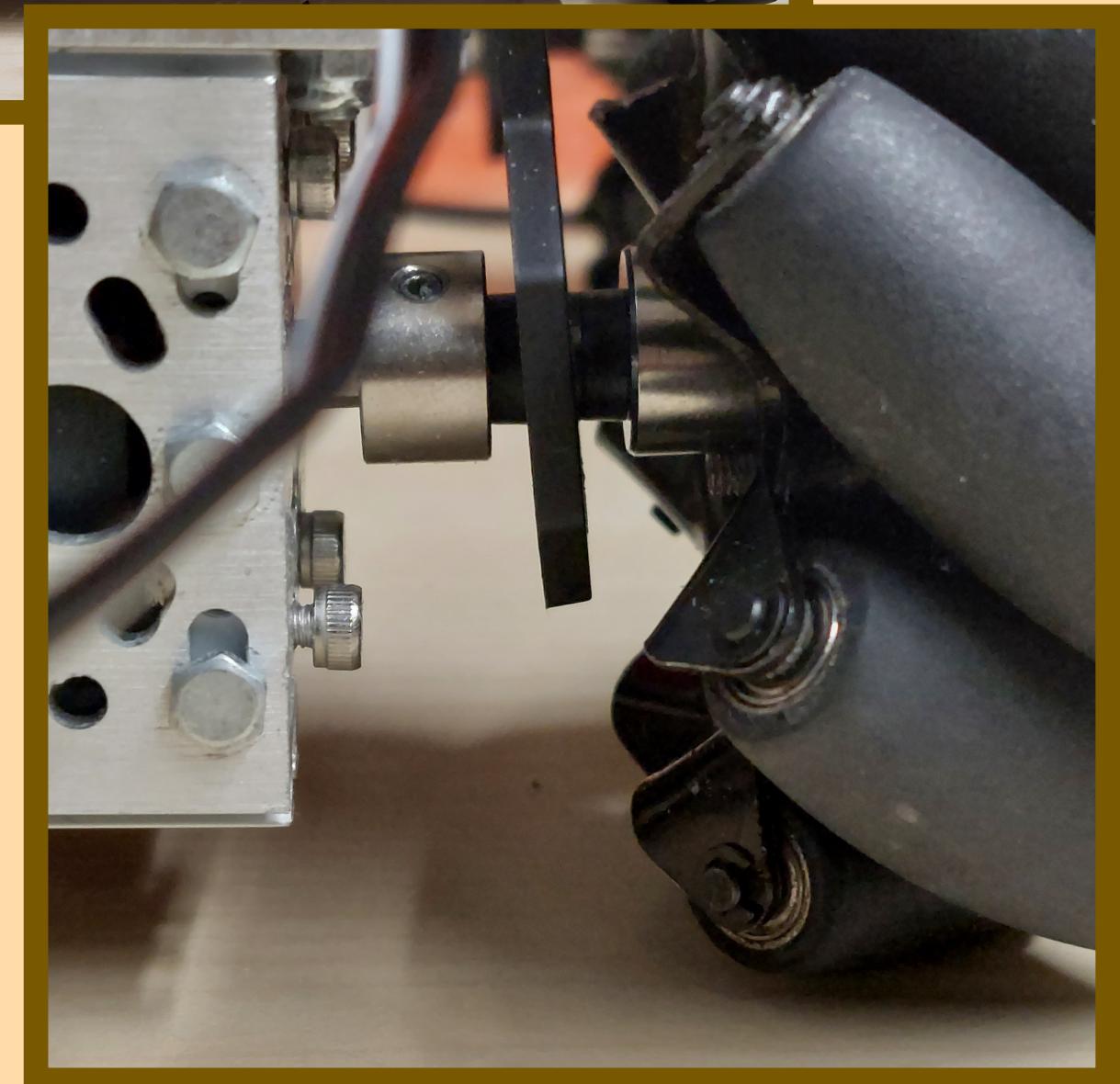
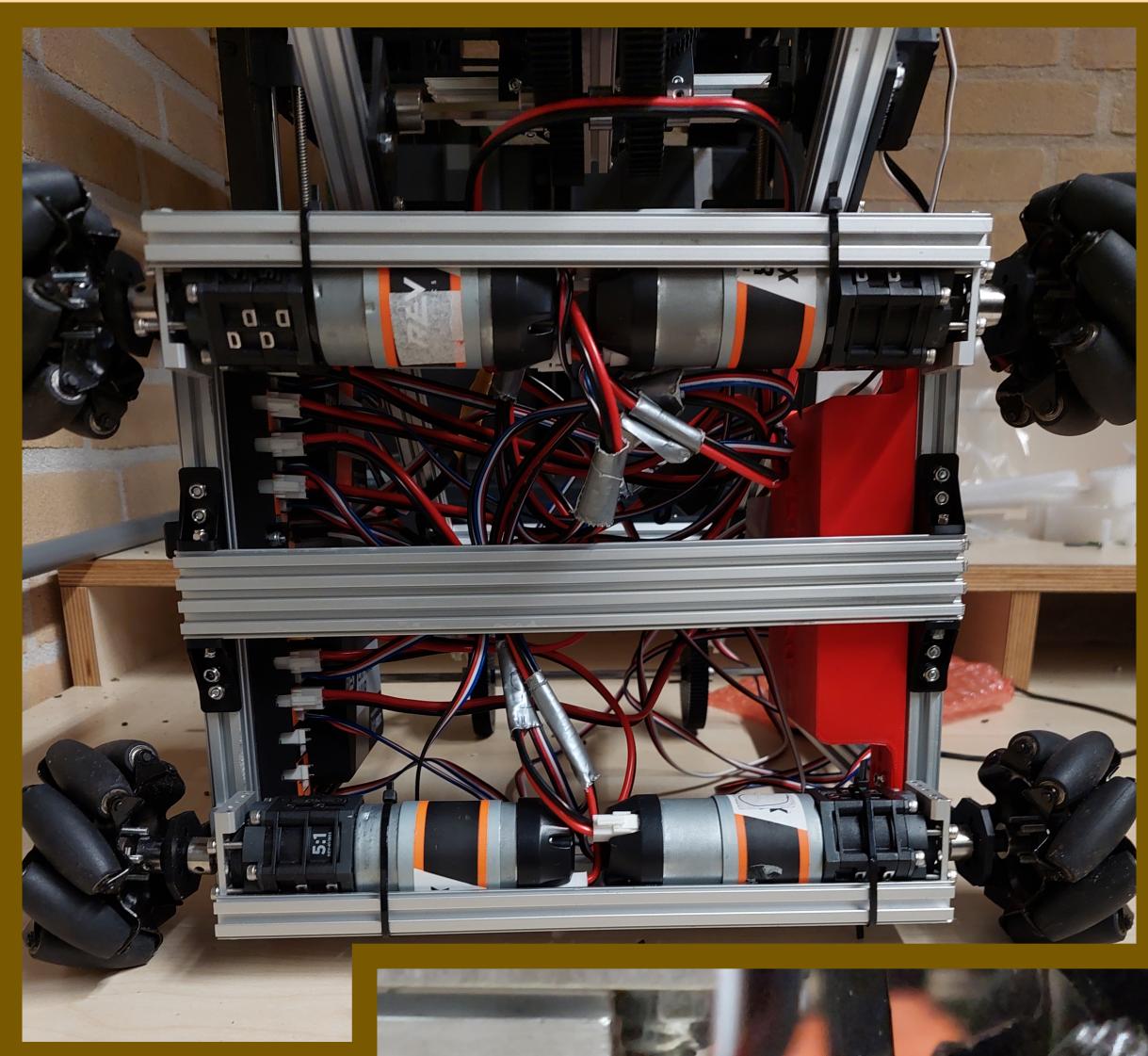
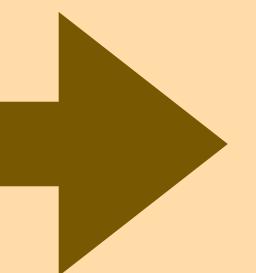
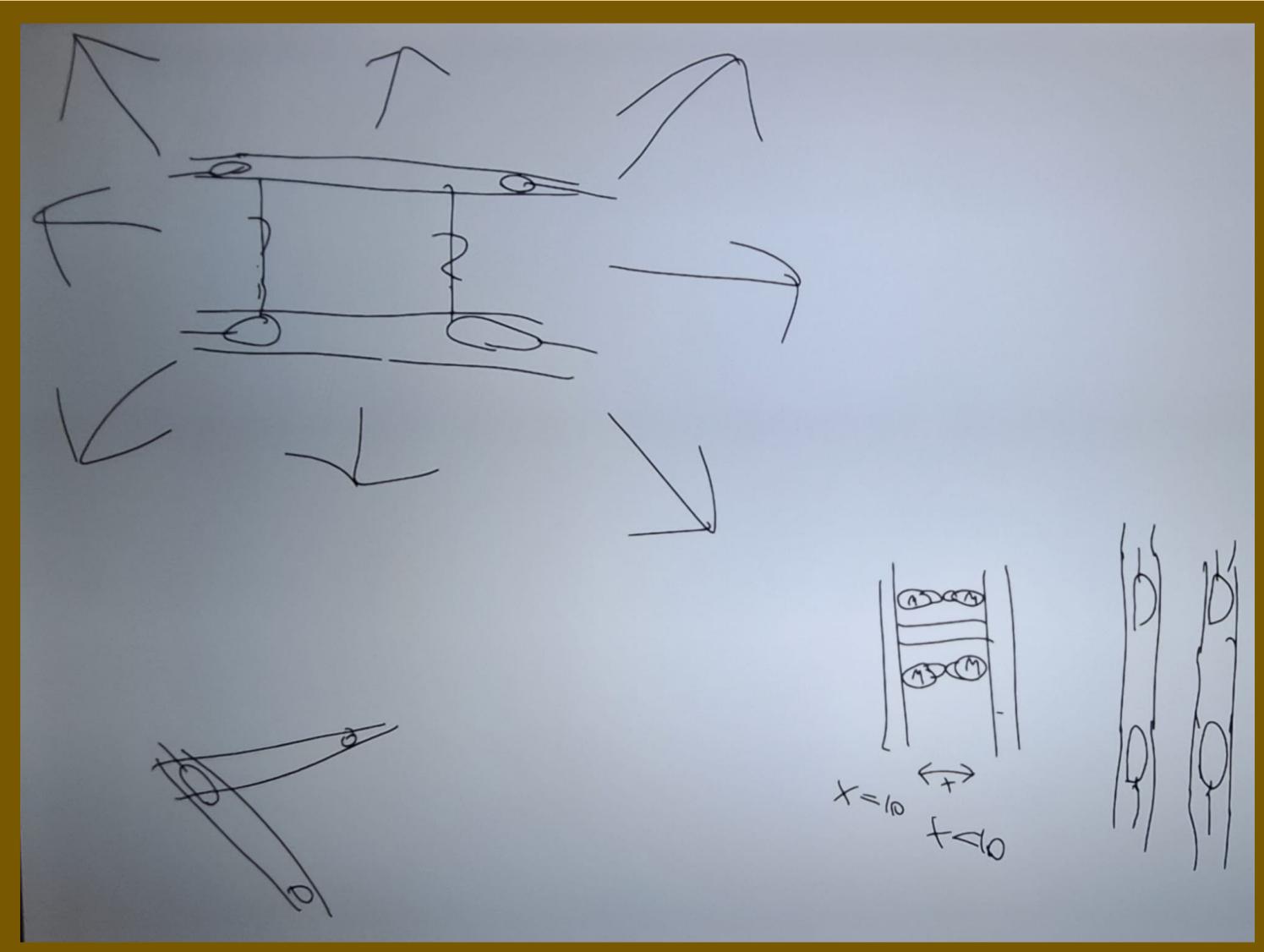
Hardware

Versie 1



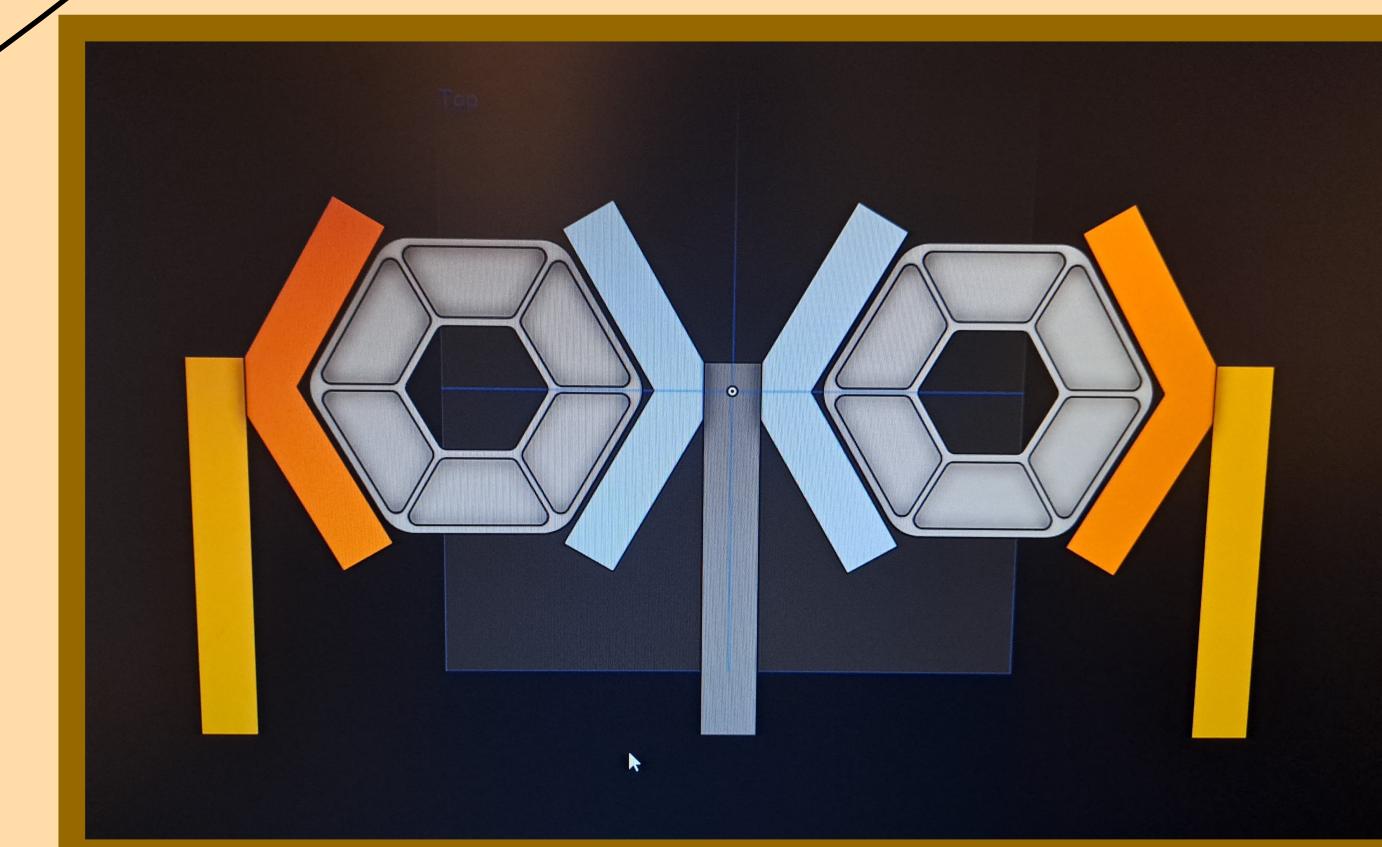
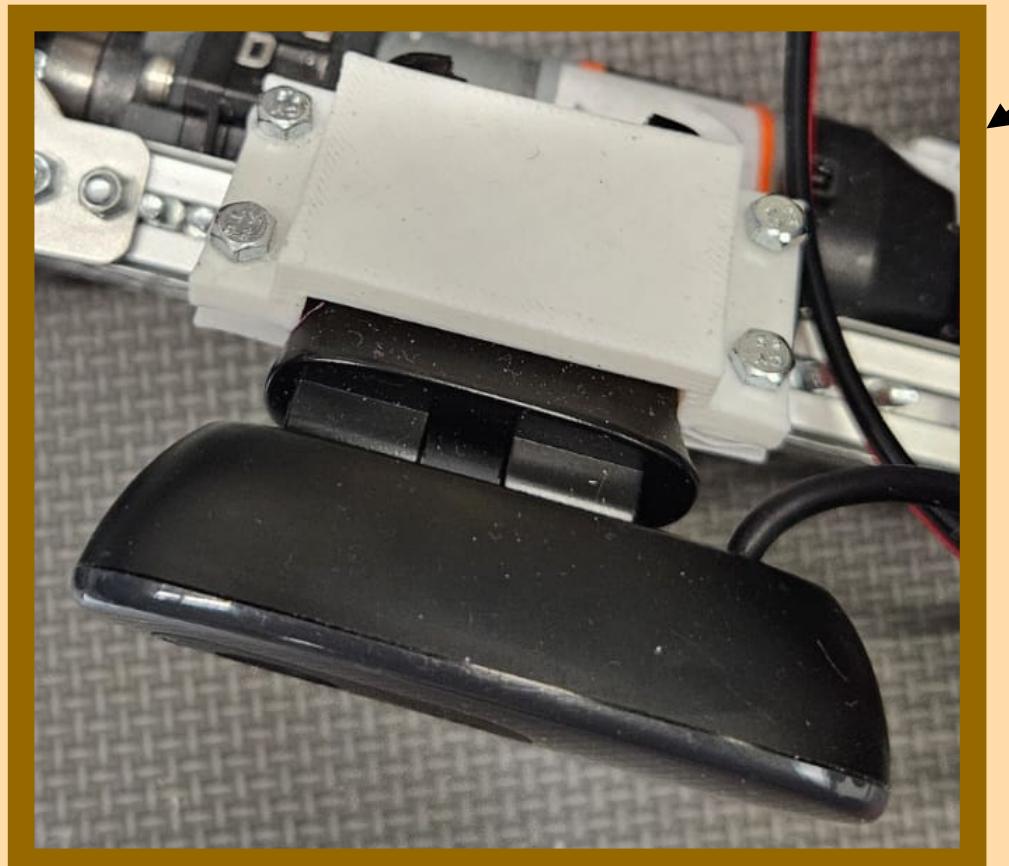
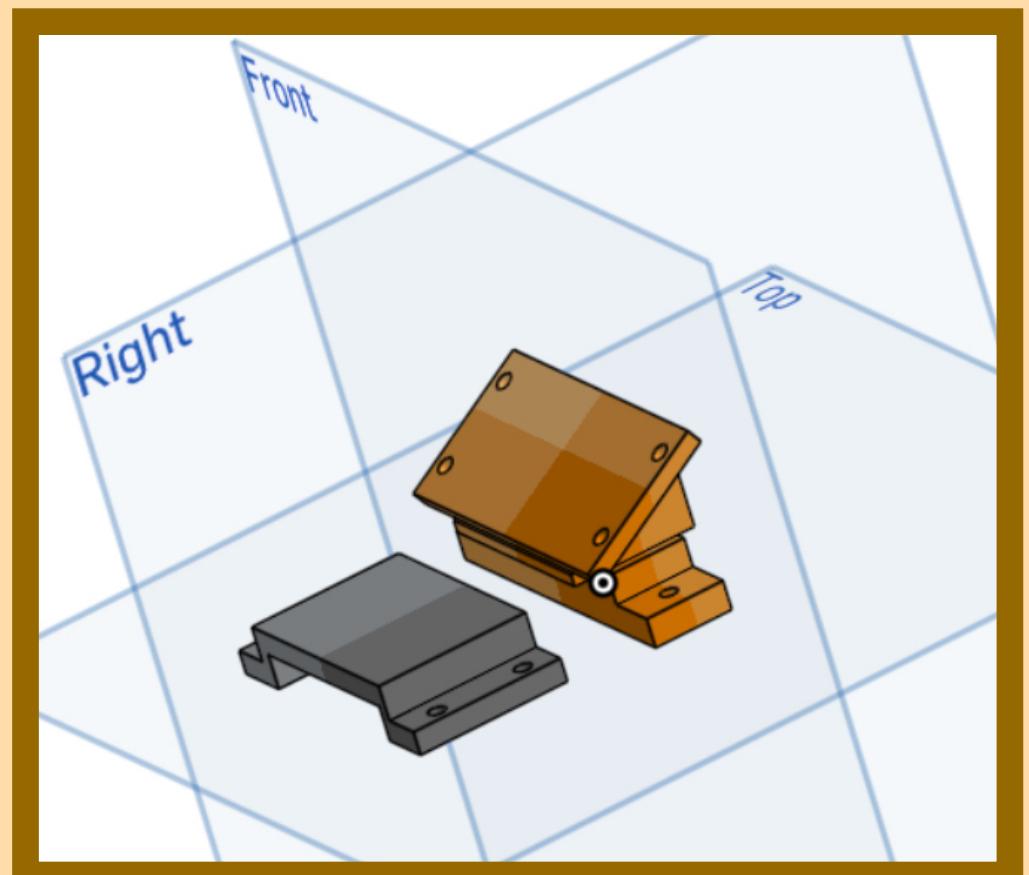
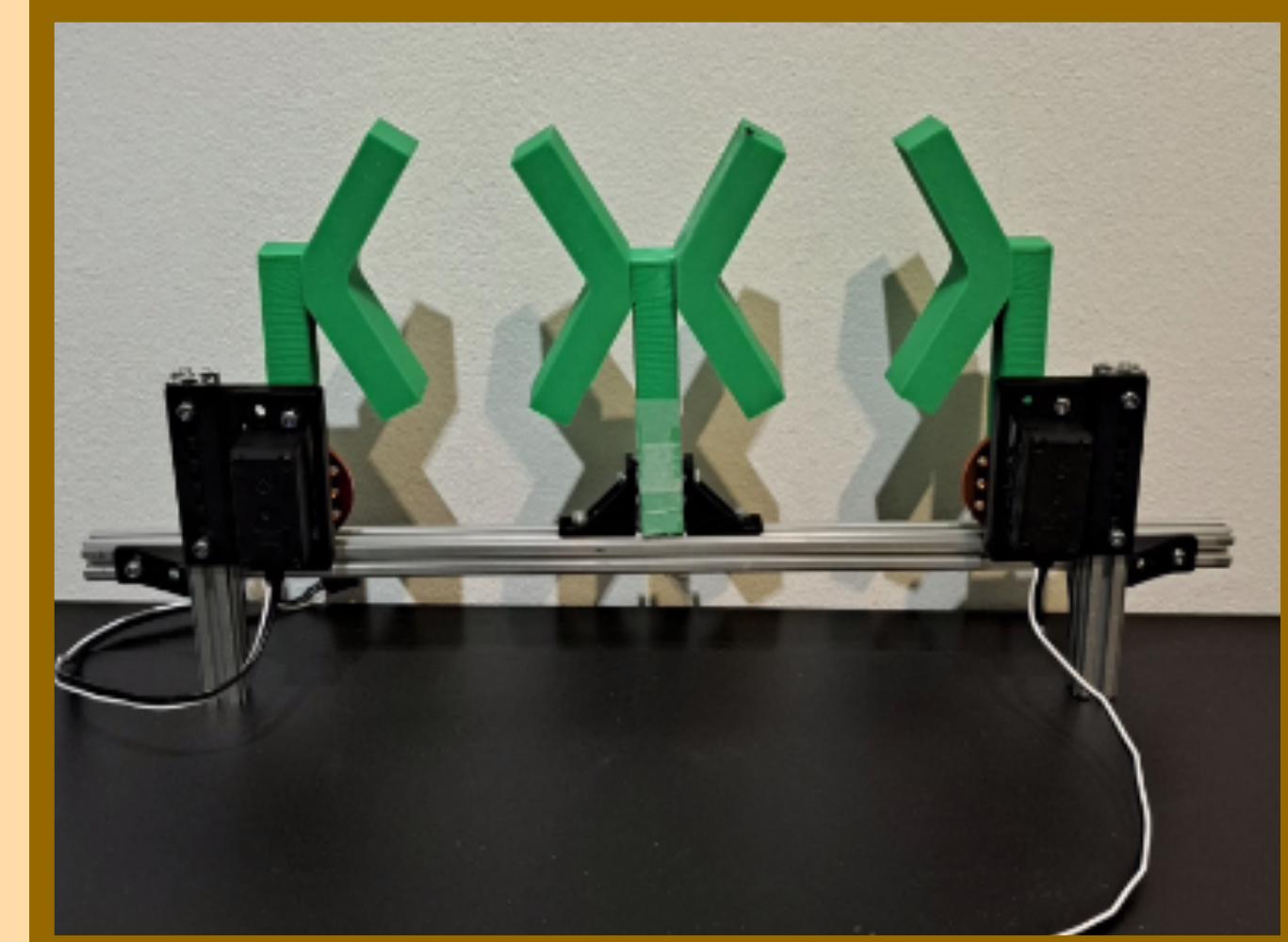
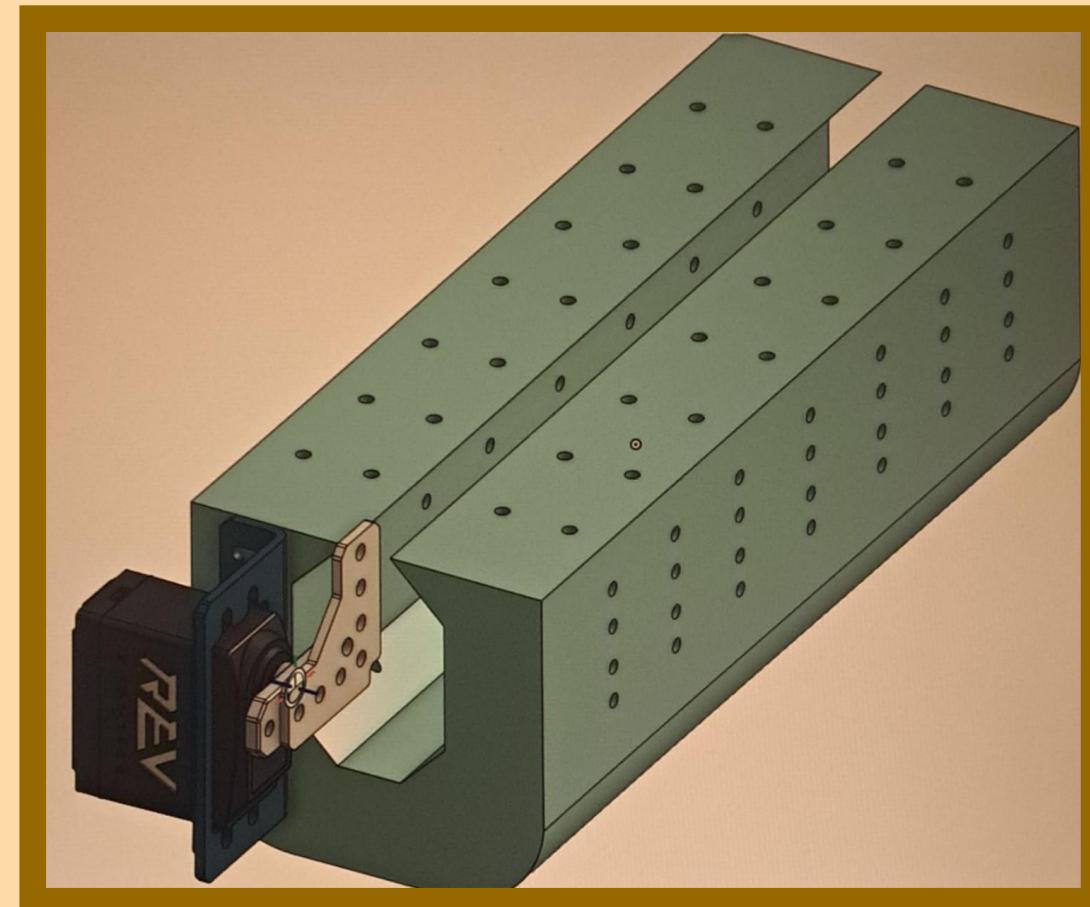
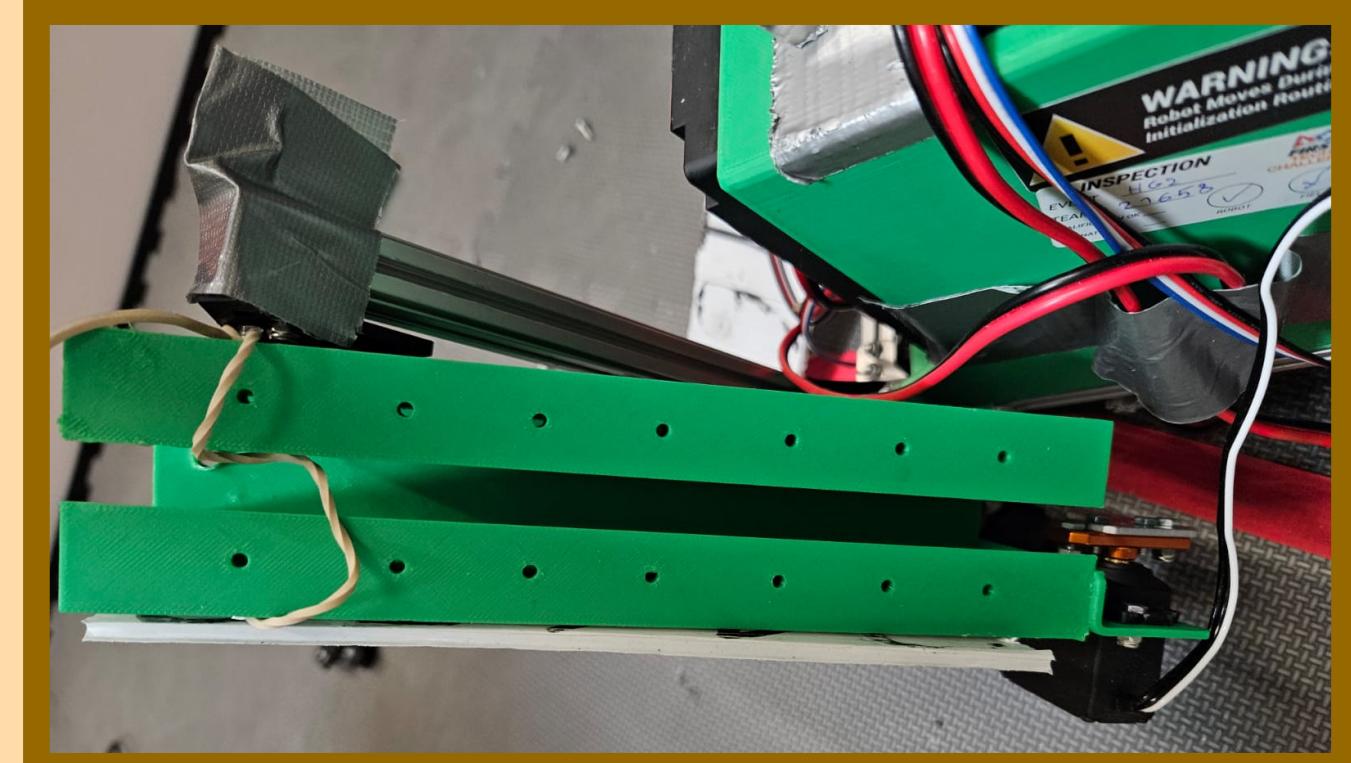
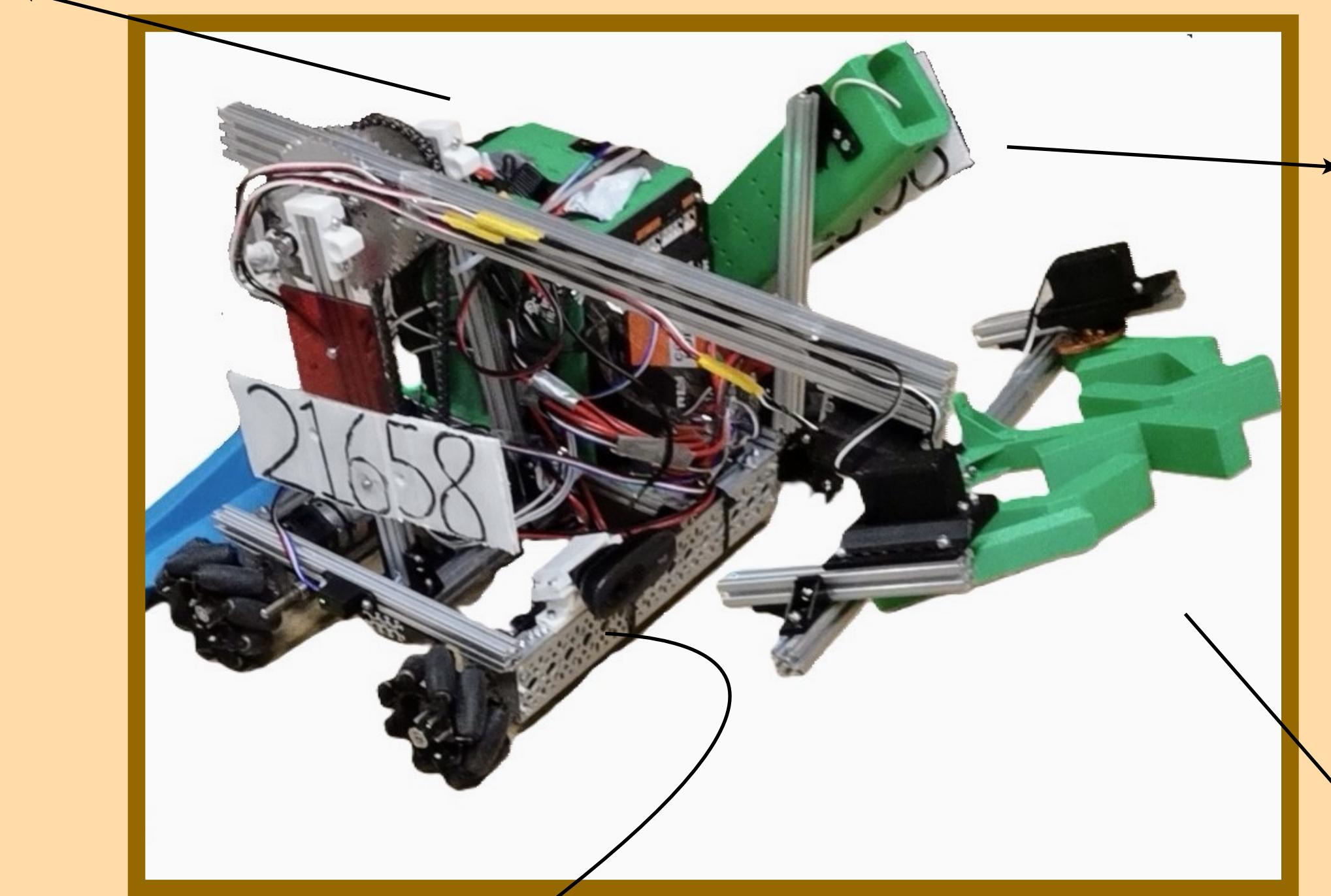
Hardware

Drivetrain



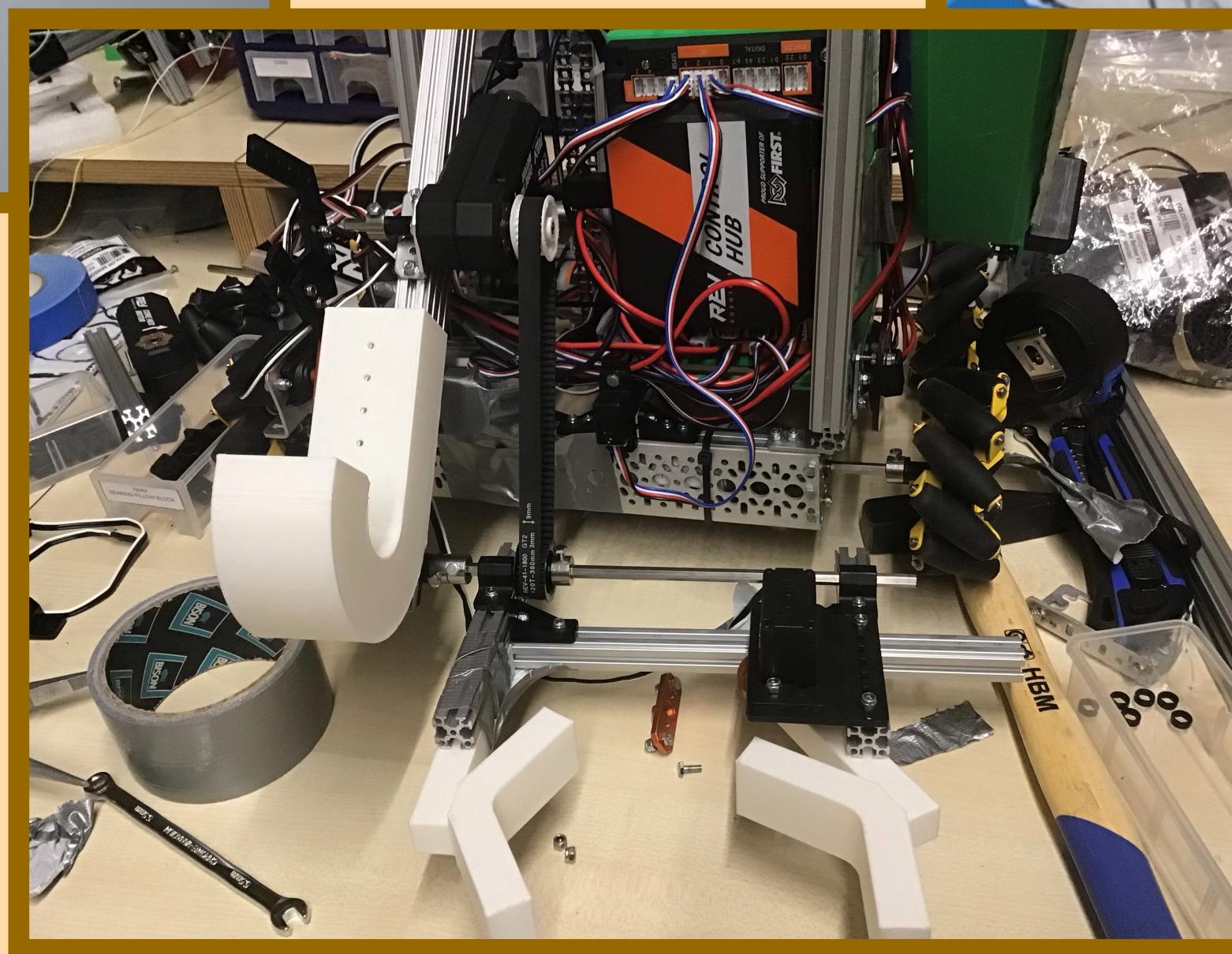
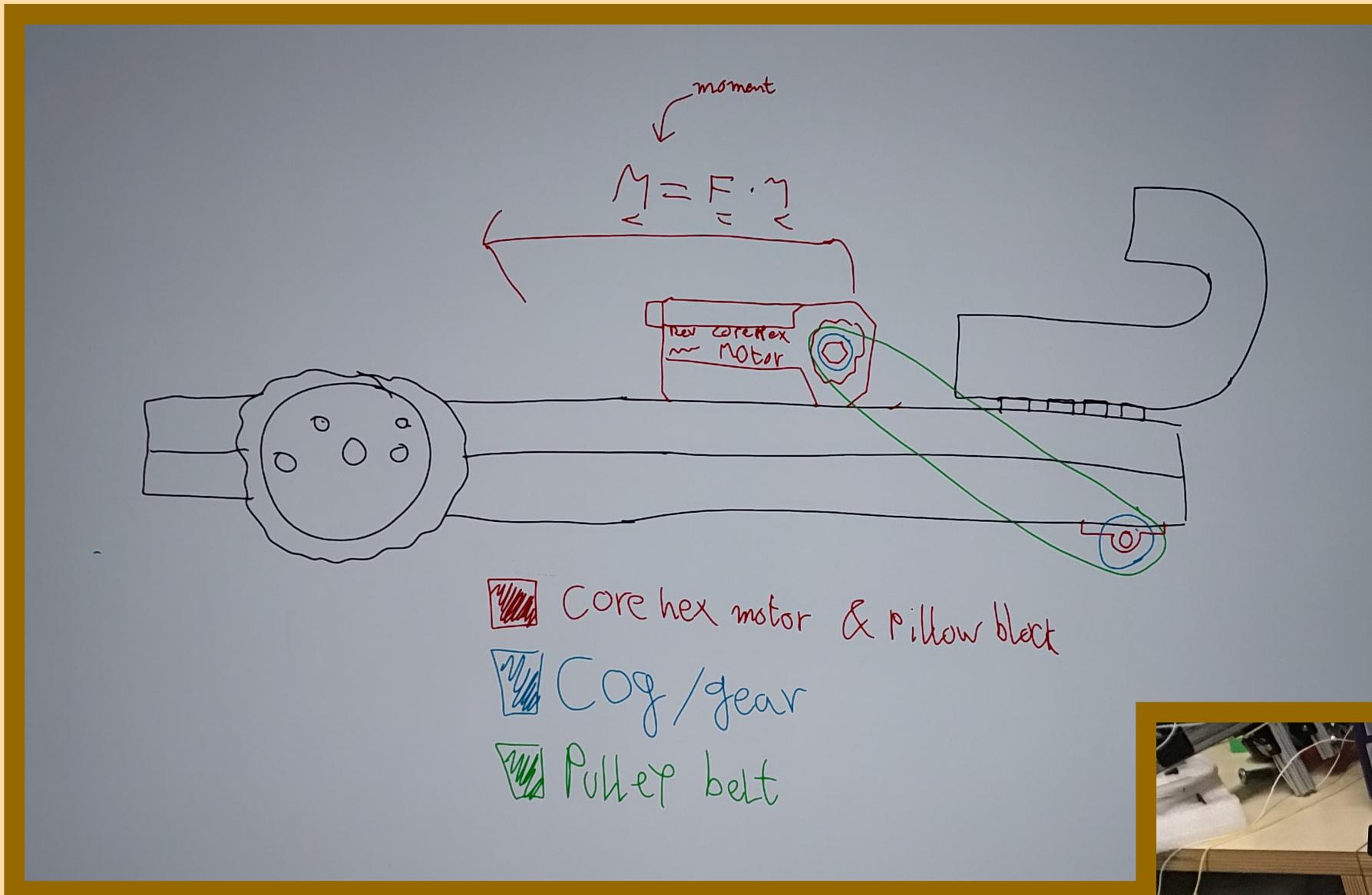
Hardware

Versie 2



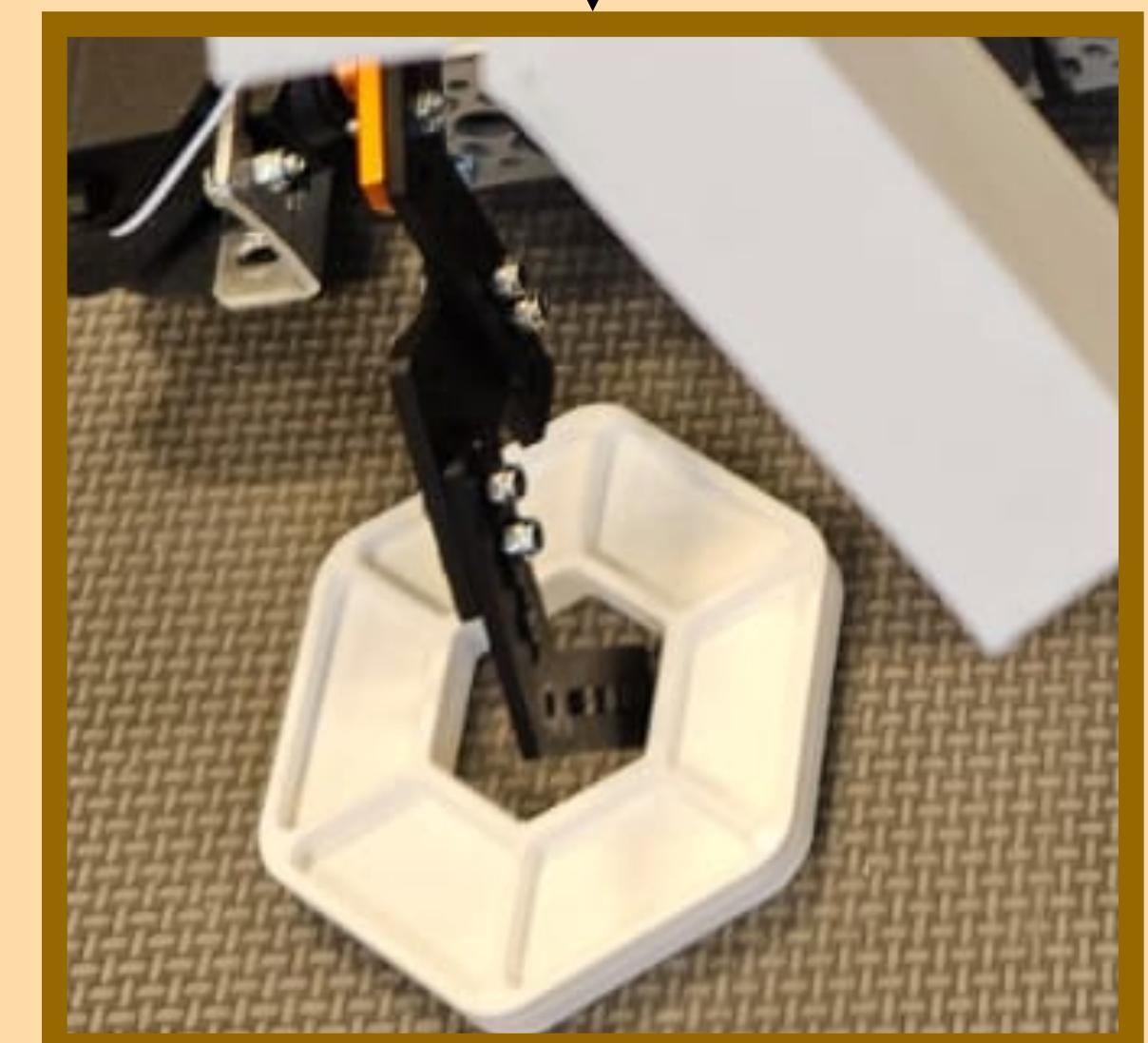
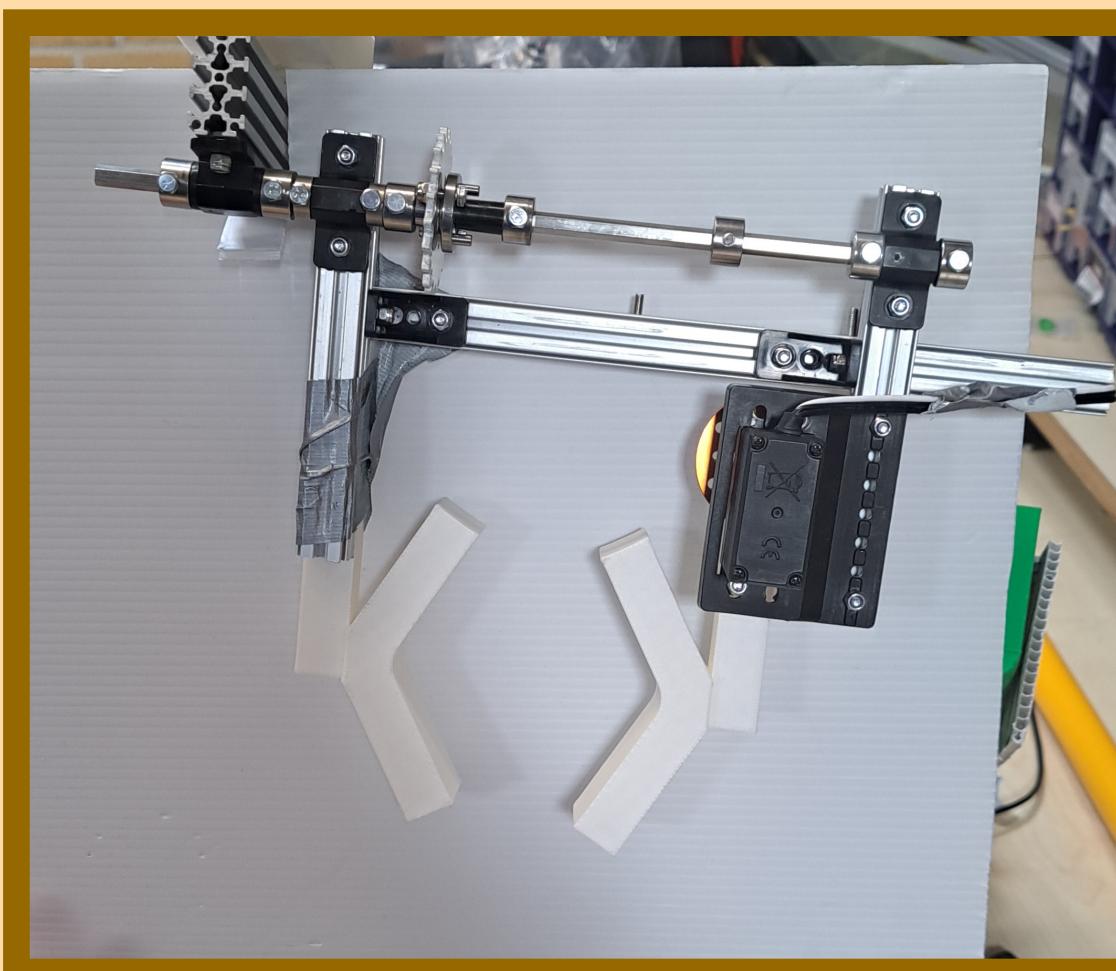
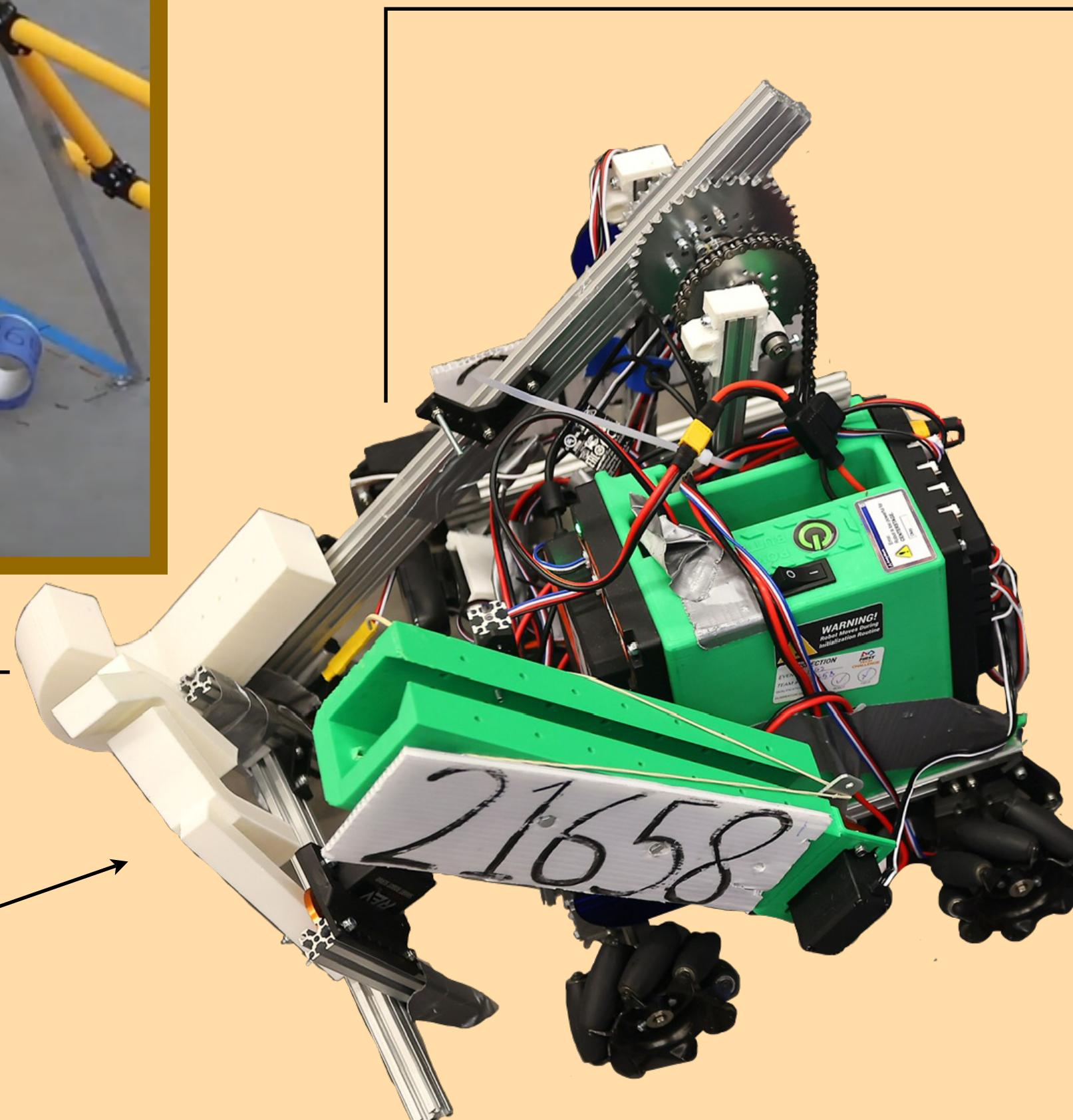
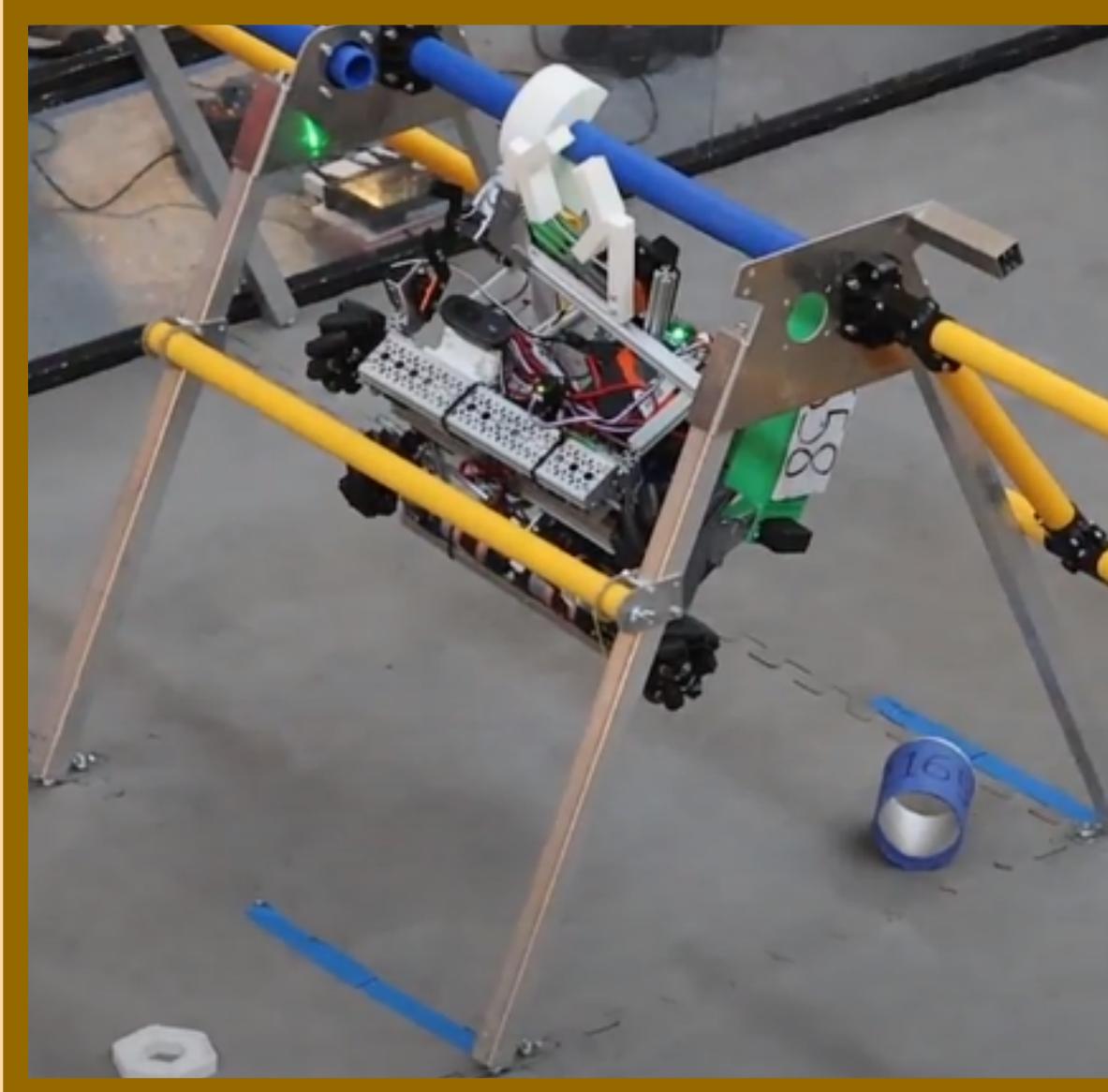
Hardware

Arm en pols

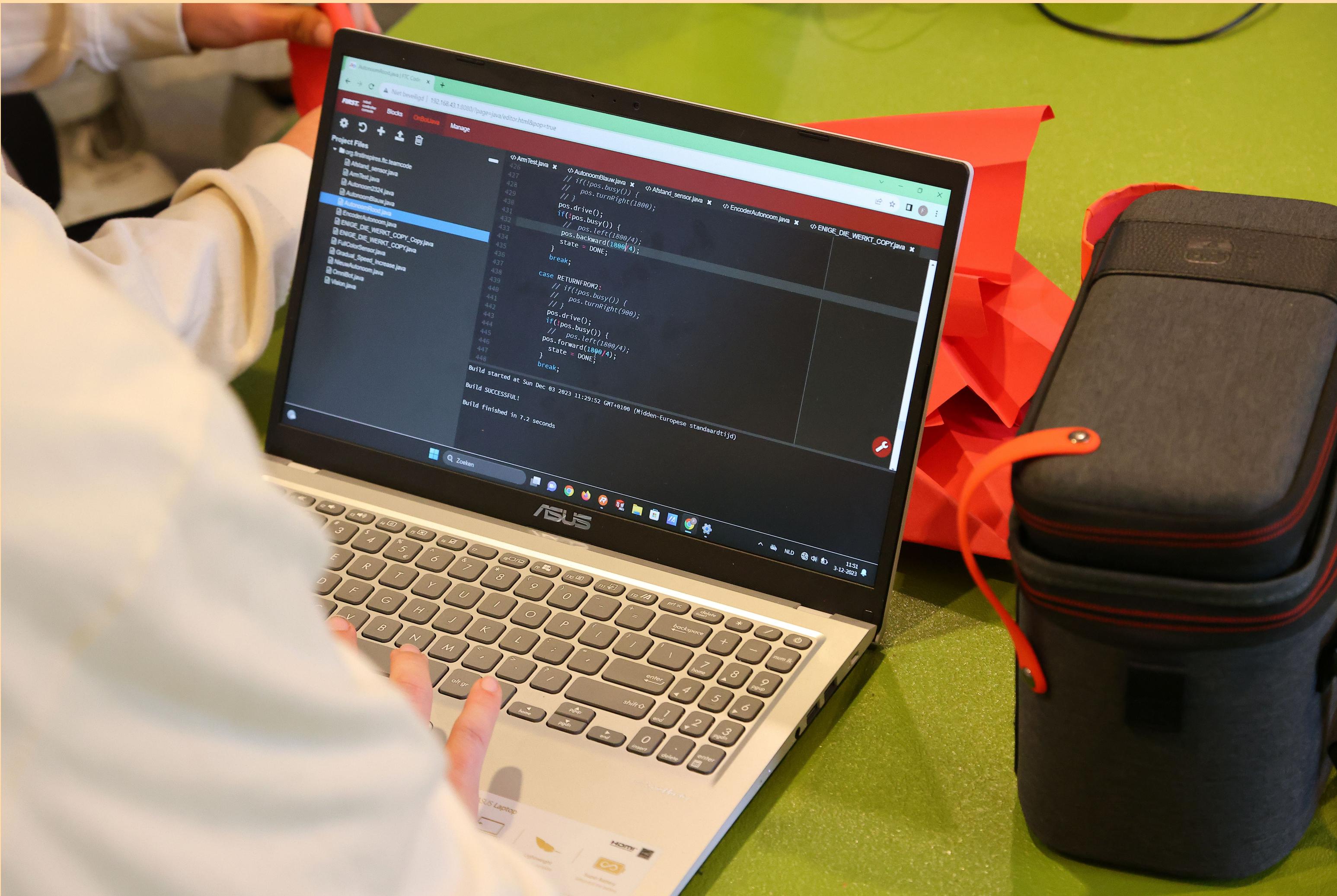


Hardware

Versie 3



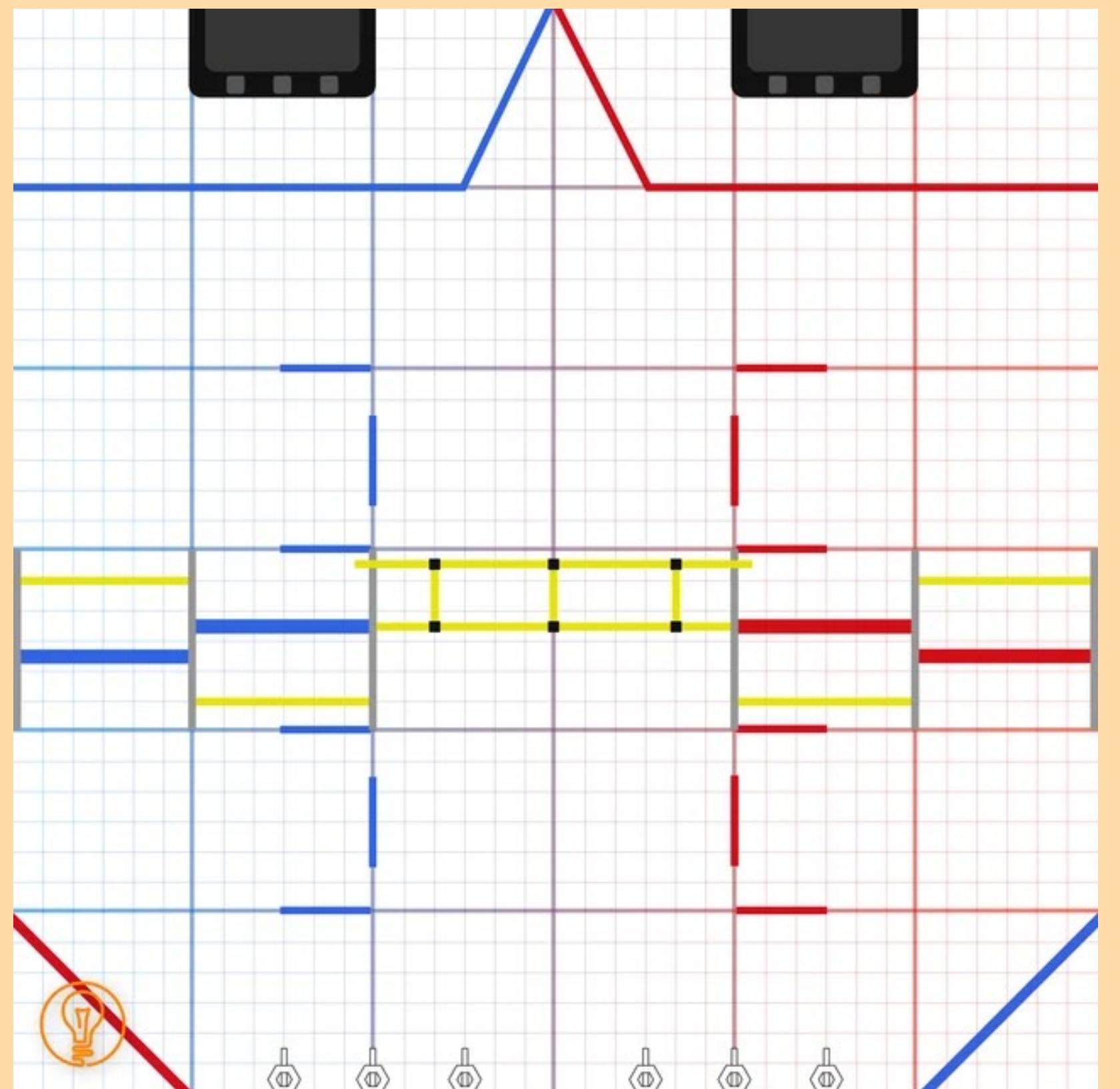
Software



Software Autonomous

- Scannen
- Webcam
- Pixels plaatsen

```
if(pos.scan()) {  
    zone = 3;  
    //pos.turnRight(223);  
    state = TURNTOLINE;  
} else {  
    //state = DONE;  
    telemetry.addData("FAILED", state);  
    telemetry.addData("Afstand: ", distance.getDistance(DistanceUnit.CM));  
    telemetry.update();  
    pos.turnLeft(225);  
    //backward(20);  
    state = MOVETOZONE2;  
}
```

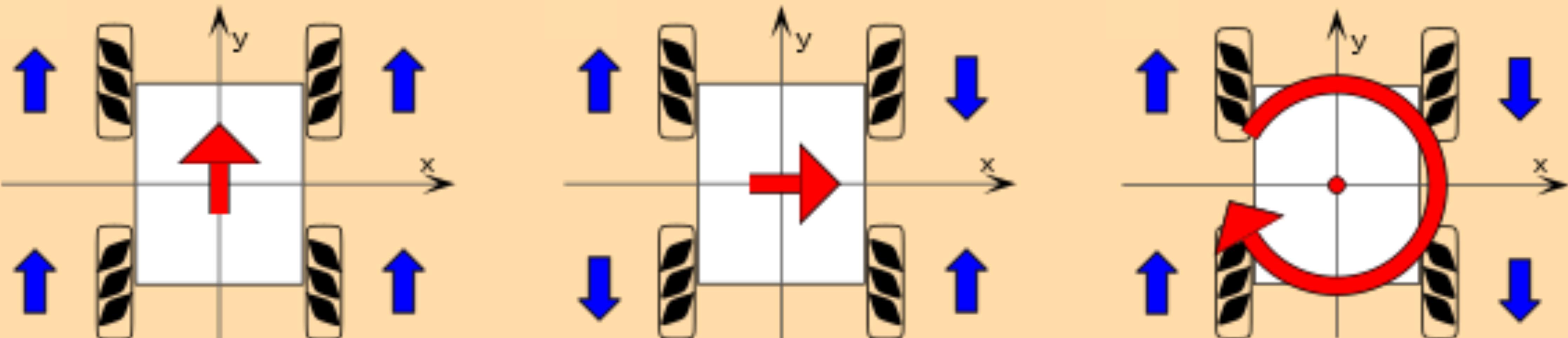


Software

TeleOp

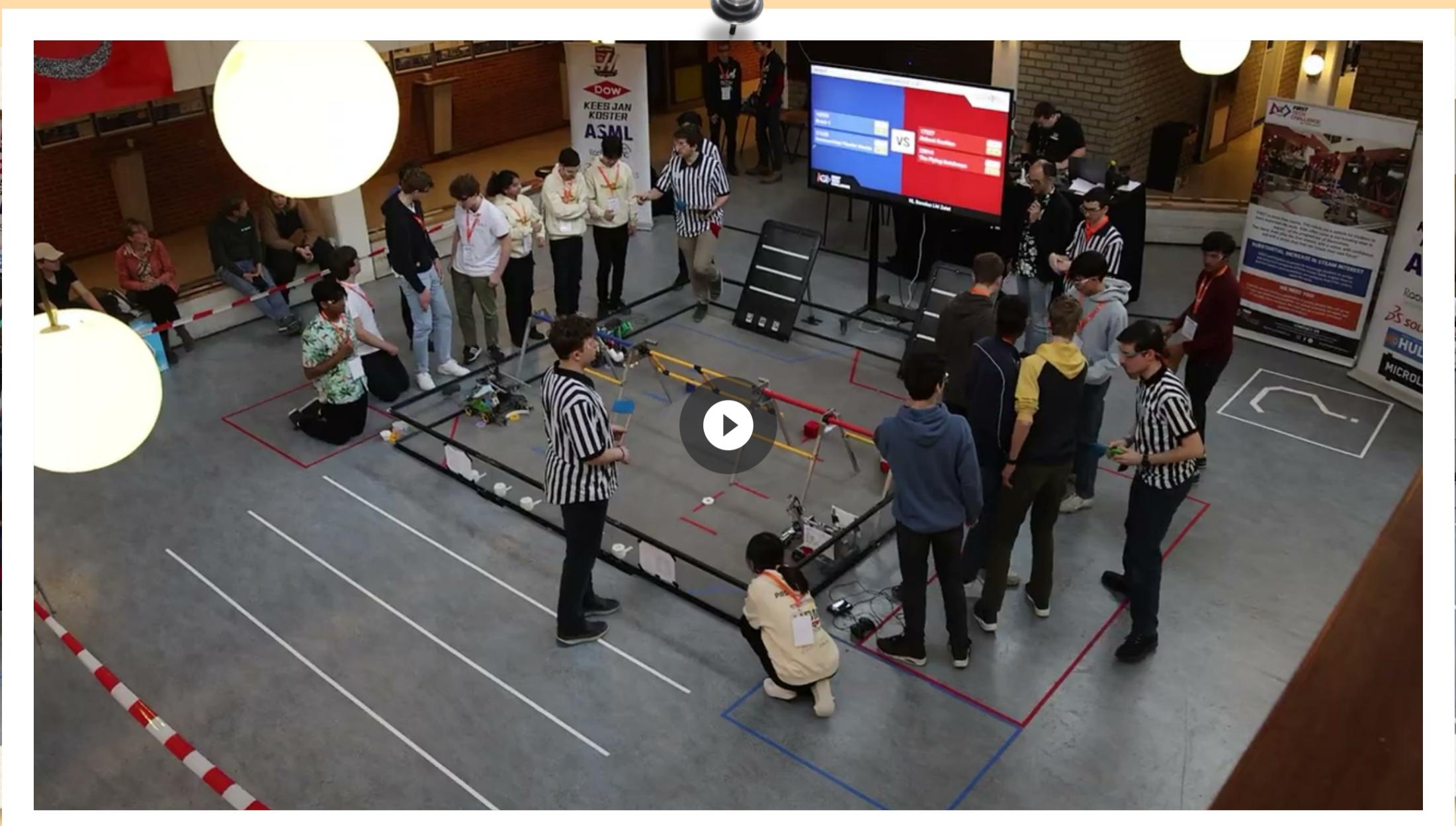
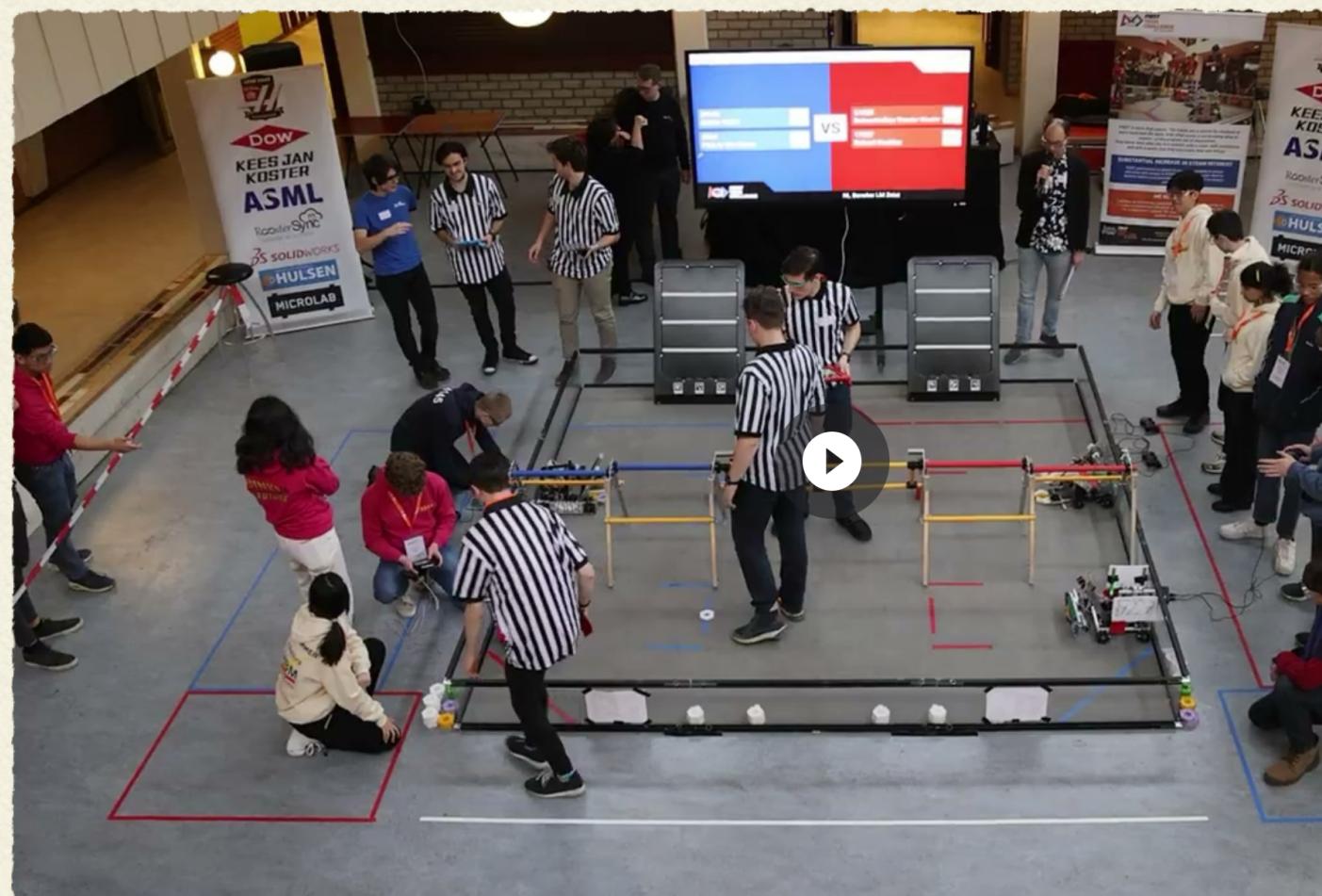
```
double denominator = Math.max(Math.abs(y) + Math.abs(x) + Math.abs(rx), 1);  
double frontLeftPower = (y + x + rx) / denominator;  
double backLeftPower = (y - x + rx) / denominator;  
double frontRightPower = (y - x - rx) / denominator;  
double backRightPower = (y + x - rx) / denominator;
```

- Rijden
- Arm
- Knopjes



Software

Voorbeelden



Evaluatie

Problemen

- Inconsistente draaias
- Disconnecties
- Verkeerde richting
- Te vroeg stoppen
- Code verdwenen

Oplossingen

- Sensoren & IMU
- Tape
- Webcam
- Tijd tekort

Live demonstratie



Einde

