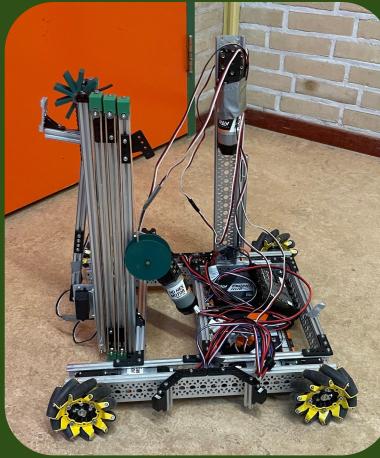
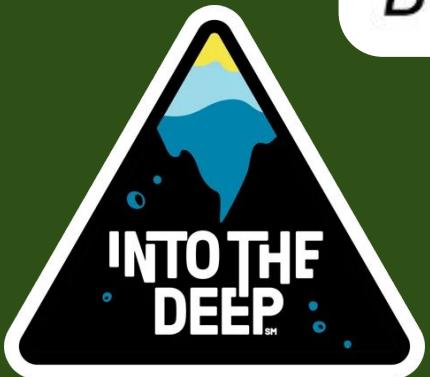


FTC INTO THE DEEP 2024-2025
M-Mais #23288
Maria Galagan, Jasper Geerse,
Enzo Richardson, Nout Urban

Inhoudsopgave

- Wat is FTC?
- Maak kennis met het team
- Team plan
- Tijdlijn
- Design proces
- Hardware
- Software
- Outreach
- Robot demo
- Promo
- Vragen



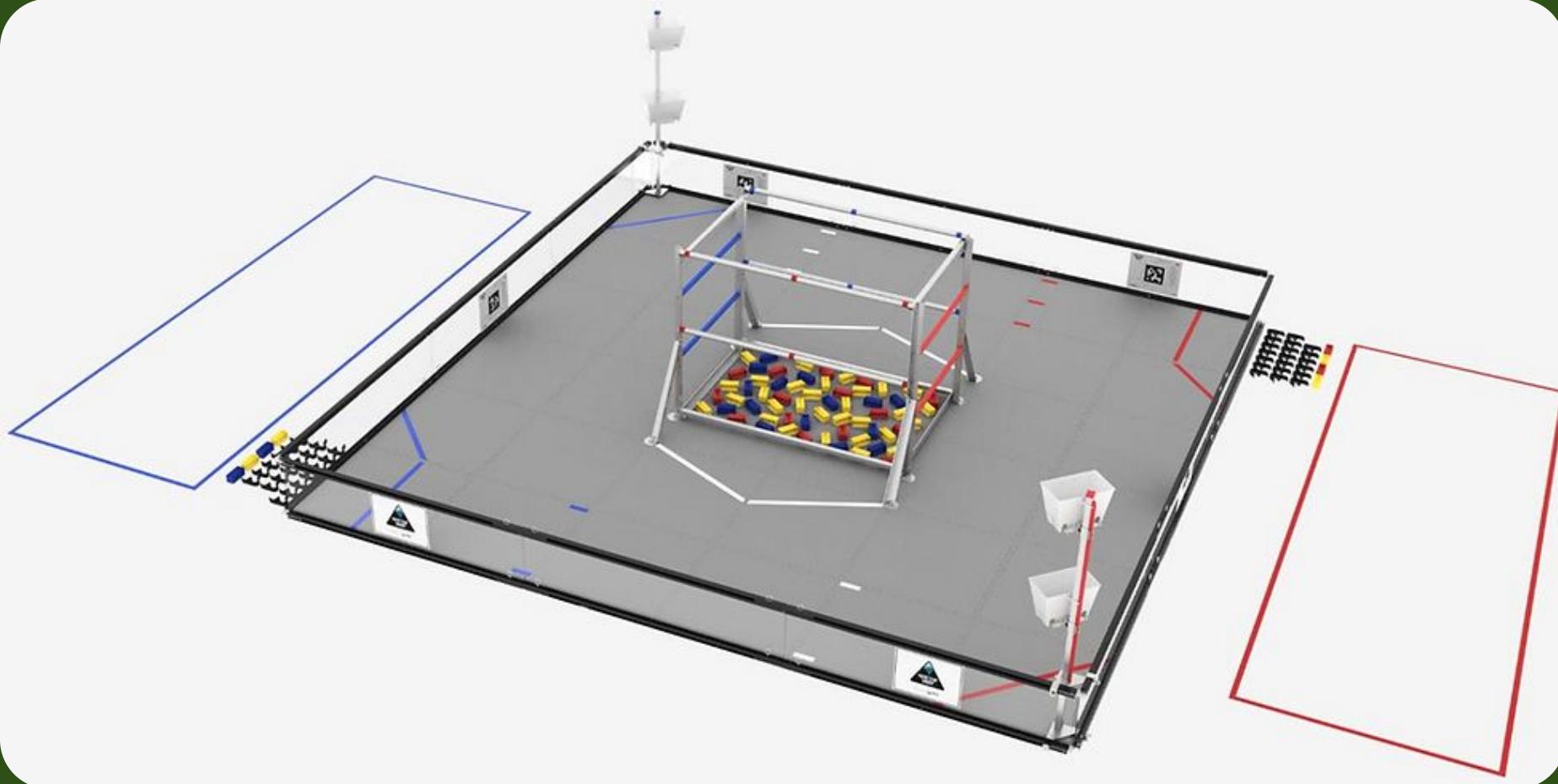


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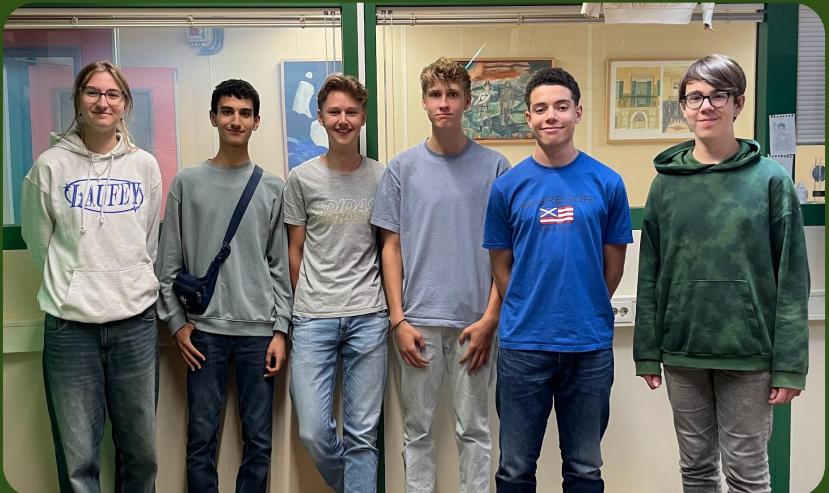


Wat is FTC?

- FIRST Tech Challenge
- Internationale robotica competitie
- Evenementen
- Wedstrijden
- Beoordeeld
- Gracious Professionalism
- Awards
- INTO THE DEEP



Maak kennis met het team



Team plan en doelen

- Elke dinsdag EMC
- Kanban bord
- Duidelijke communicatie
- Tijdmanagement
- Financiële en outreach doelen
- FIRST aan zoveel mogelijk mensen laten zien

- Autodesk Fusion 360
- Risicobeheer
- Roadrunner



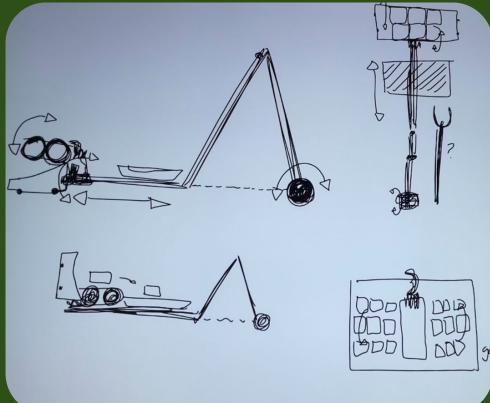
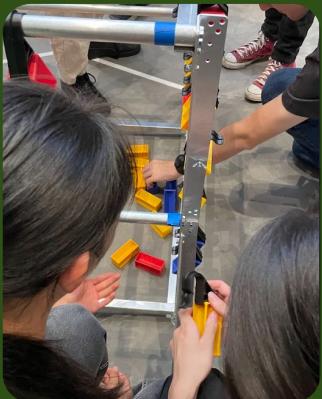
The image shows two side-by-side screenshots of a digital Kanban board interface. The left screenshot shows a column titled 'In Progress M-Mais' with three items: 'sponsor werving', 'vertical slide fixen', and 'ontwerp schaakconstructie'. The right screenshot shows a column titled 'Done M-Mais' with three completed items: 'cascade bak monteren', 'insta post sponsors', and 'servo programma verfijnen'. Both columns have a 'Draft' status indicator and a '+ Add item' button at the bottom.



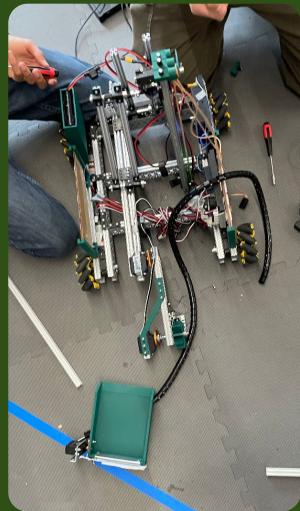
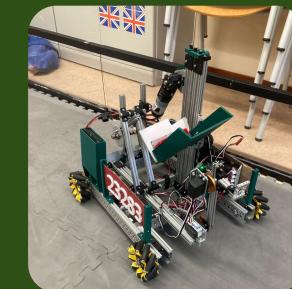
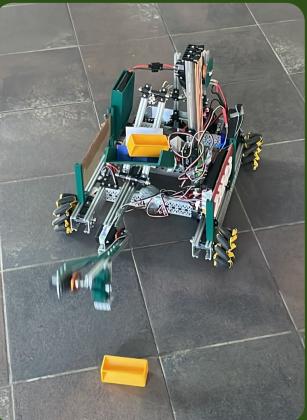
Tijdlijn



9 September,
Kickoff



9 November,
Scrimmage



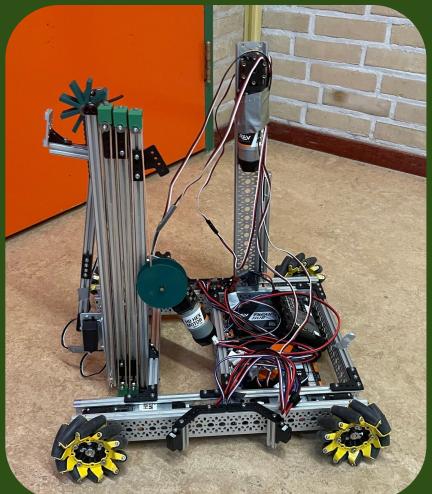


8 December,
Qualifier





21 Januari, PWS
presentatie



15 Februari, Benelux
Championship



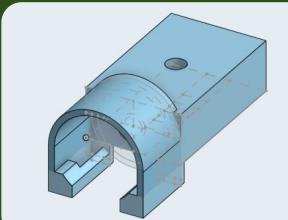
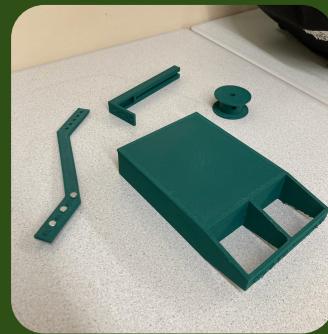
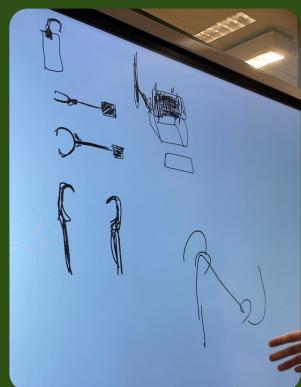
21 Februari, DoDEA -
Europe

Design proces

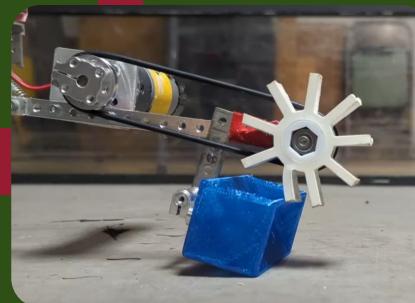
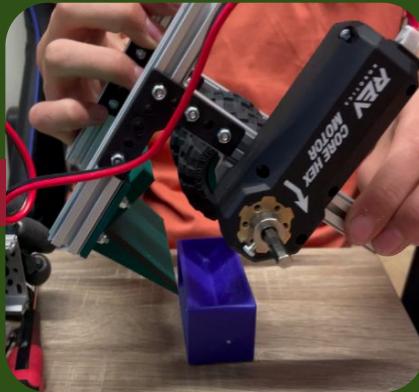
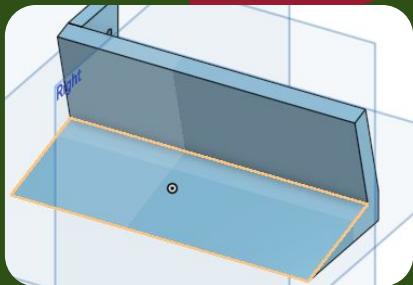
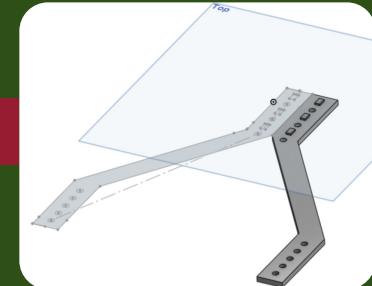
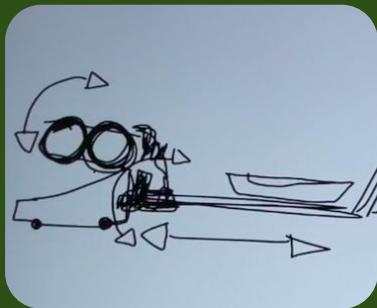
- Schetsen
- Prototypes
- 3D-printen
- 3D-modelleren

- Prioriteiten
- Afwegingen
- Realistisch blijven

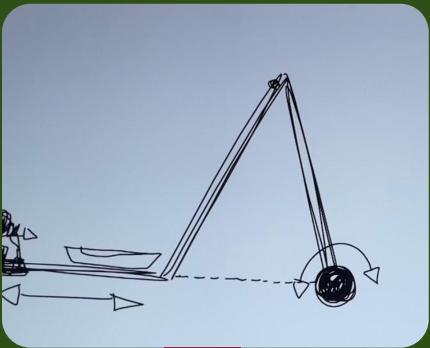
1. Het verzamelen van *samples*
2. Verplaats *samples* naar het liftbakje
3. Score de *samples* in de *baskets*



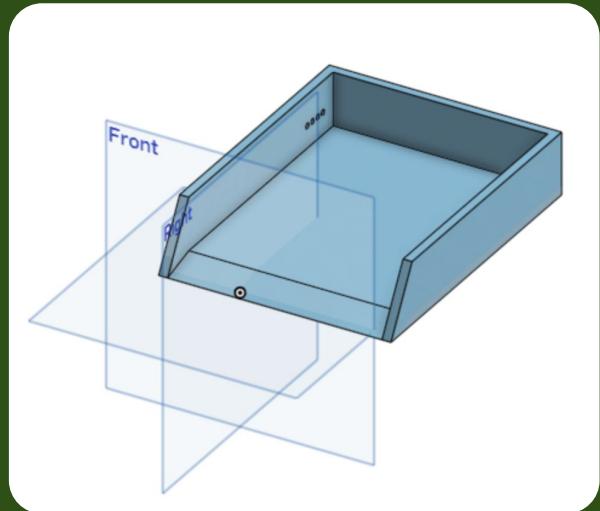
1. Het verzamelen van samples -> active intake



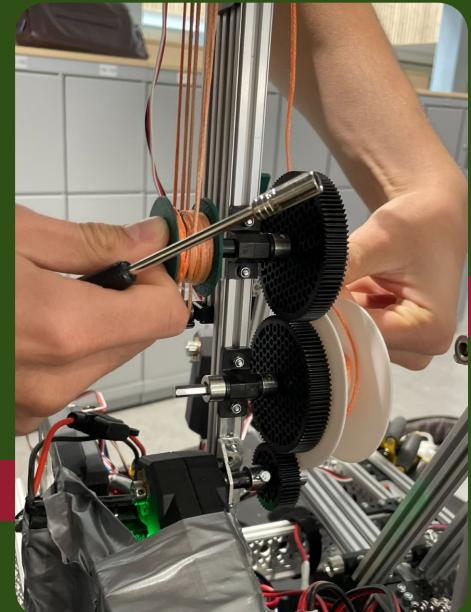
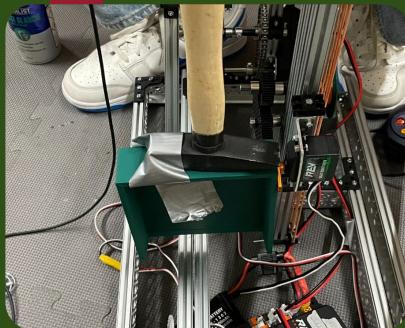
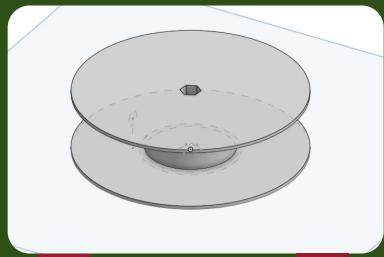
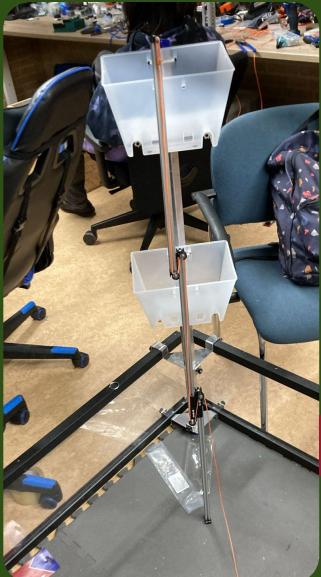
-> horizontal sliders

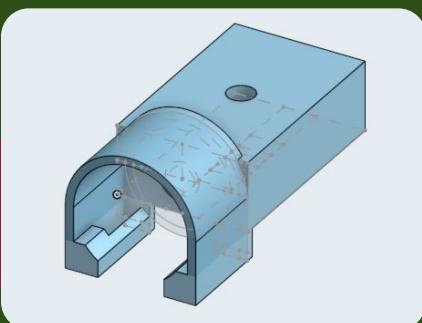
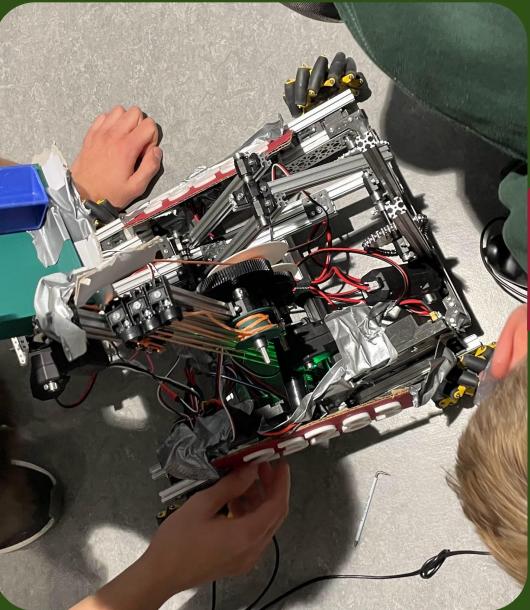


2. Verplaats samples naar het liftbakje -> outtake



3. Score de samples *in* de baskets -> lift systeem

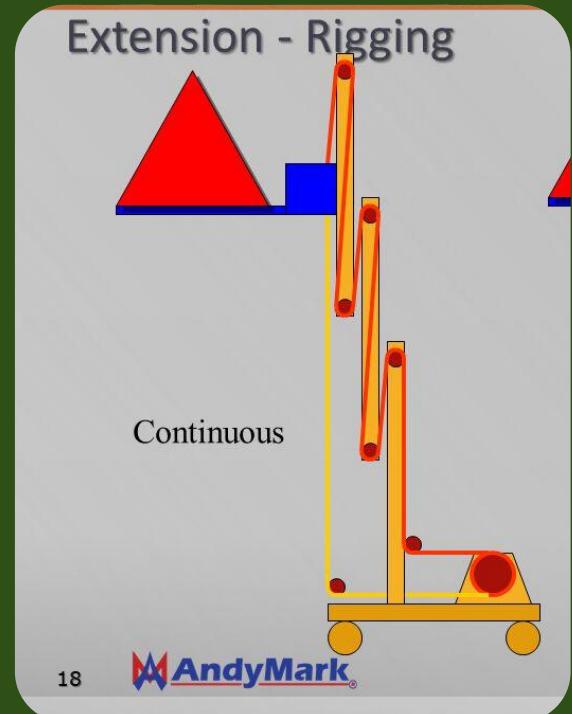
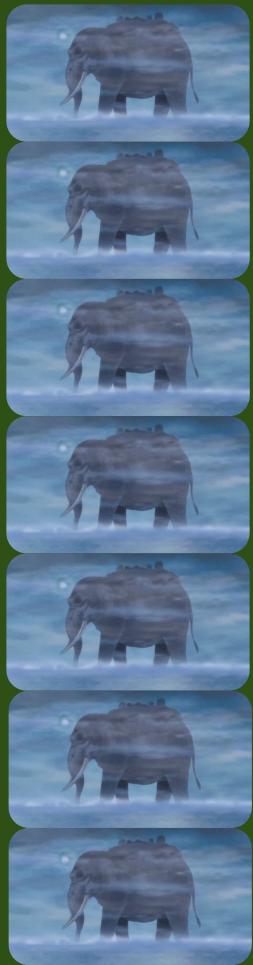




Hardware

- Control Hub en Expansion Hub
- Rev Robotics
- Drivetrain
- Motoren
- Ductape!





Software



- Java
- Draadloos verbonden via WiFi

- TeleOp
- Controller

- Autonomo
- Roadrunner
- Sensoren en IMU

```
if (gamepad1.y) {  
    CascadeLift.setTargetPosition(-7300); // Set the target position for lift  
    //2500 is closest, 2000 is used for debugging  
    CascadeLift.setMode(DcMotor.RunMode.RUN_TO_POSITION); // Move to target position  
    CascadeLift.setPower(1); // Set motor power to move towards target  
}  
  
// Control CascadeLift with the A button (move to home position)  
if (gamepad1.a) {  
    CascadeLift.setTargetPosition(0); // Home position  
    CascadeLift.setMode(DcMotor.RunMode.RUN_TO_POSITION); // Move to target position  
    CascadeLift.setPower(1); // Set motor power to move towards target  
}  
  
// Stop CascadeLift when it reaches the target position  
if (!CascadeLift.isBusy()) {  
    CascadeLift.setPower(0); // Stop motor once target position is reached  
}
```

```
if (gamepad2.left_trigger > 0 && gamepad2.right_trigger == 0) {
    pols.setPosition(0.6);
}

if (gamepad2.left_bumper && !gamepad2.right_bumper) {
    slurp.setPower(-0.9);
}

if (gamepad2.right_trigger > 0 && !gamepad2.right_bumper && gamepad2.left_trigger == 0) {
    pols.setPosition(0.86);
    slurp.setPower(0.9);
}

if (gamepad2.right_trigger == 0 && gamepad2.right_bumper) {
    slurp.setPower(0.9);
}

if (gamepad2.right_trigger == 0 && !gamepad2.right_bumper && !gamepad2.left_bumper) {
    slurp.setPower(0);
}

if(gamepad2.x) {
    pols.setPosition(0.78);
}
```

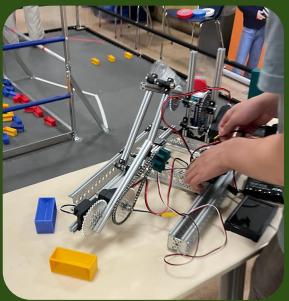
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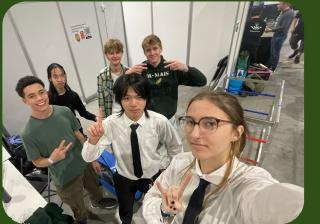
Robot demo



Outreach







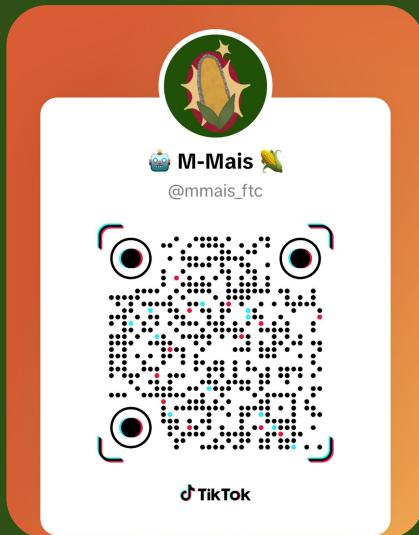


Promo

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mmais_ftc



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FTC BENELUX

CHAMPIONSHIP



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Location: AVANS Hogeschool, Hogeschoollaan 1 in Breda

Date: February 15, 2025

Free entrance!



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Meer informatie:



15
02
20
25

Vragen

