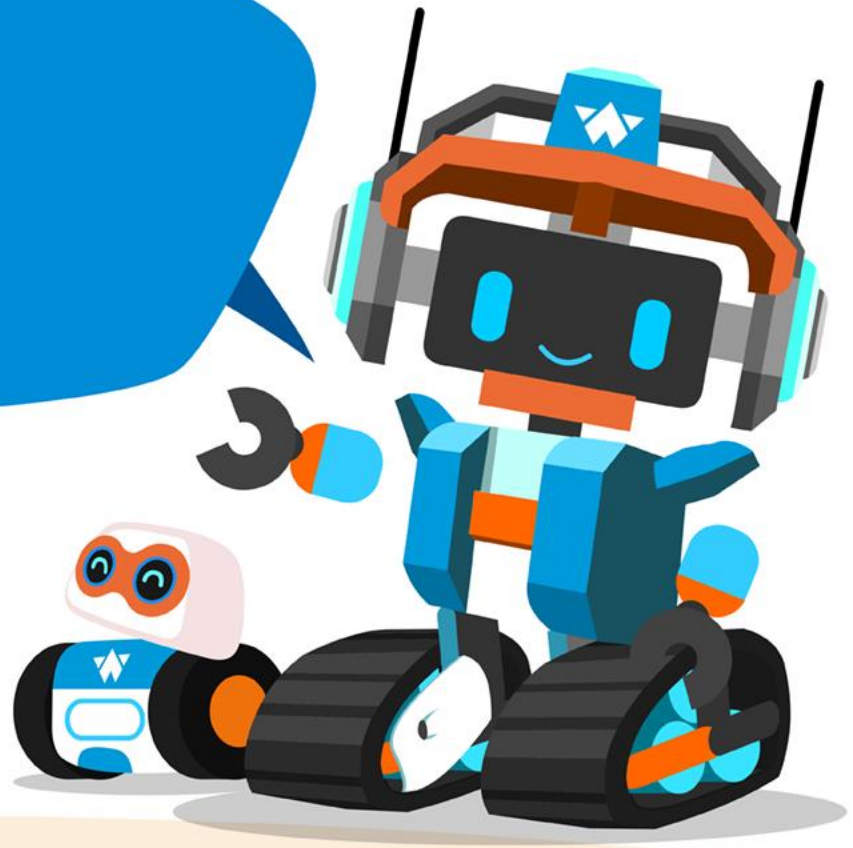
ENJOY AI 2024

INTERSTELLAR JOURNEY

CLOSING CEREMONY OF SPORTS

Task Analysis (Part 5)



Objectives:

1. In-depth analysis of task requirements and scoring rules
2. Design solutions
3. Write programs to finish the tasks

5+

Review

After four lessons, we have completed most of the tasks. Let's take a look at the final task together!

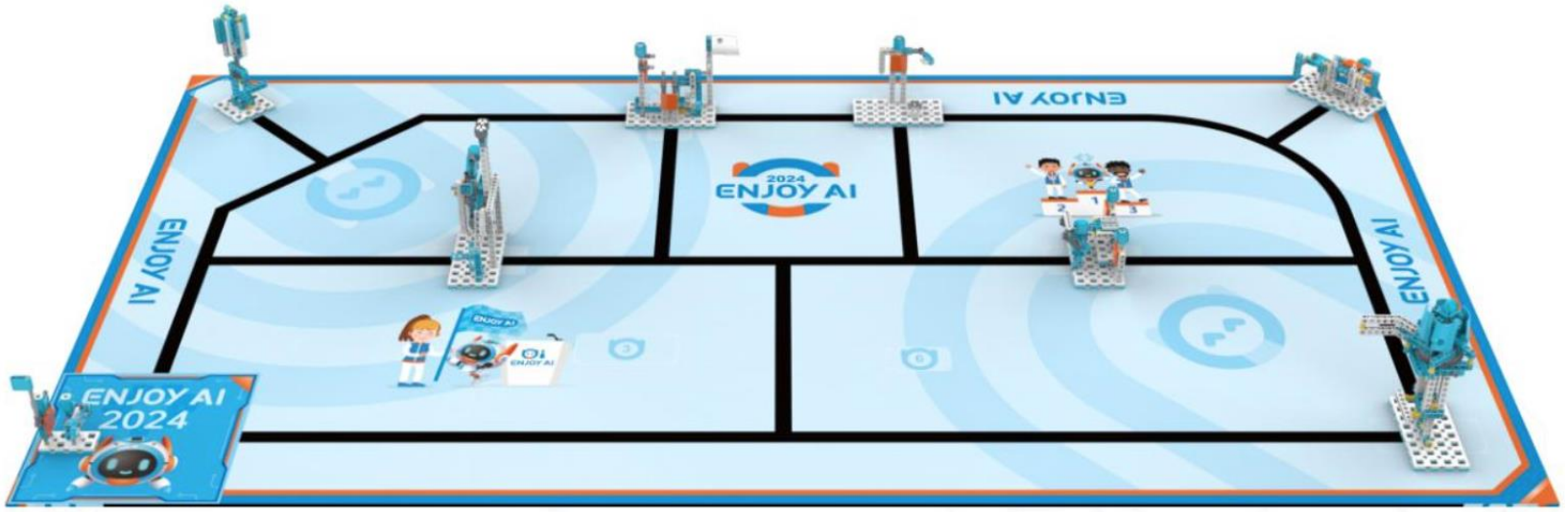
Review

1. In the previous lesson, what problems did we meet when doing tasks?

2. What factors should we consider when designing solutions for the “Torch Dousing” task?

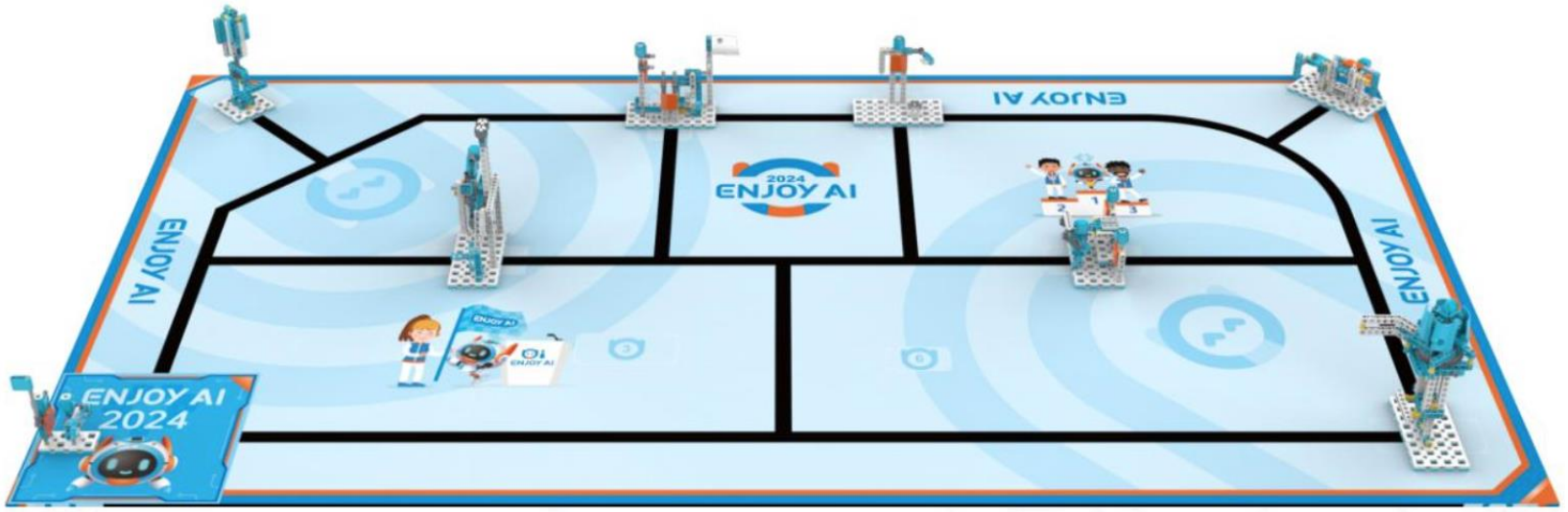
Challenges

Challenges



Hi guys, let's move to the final task!

Challenges

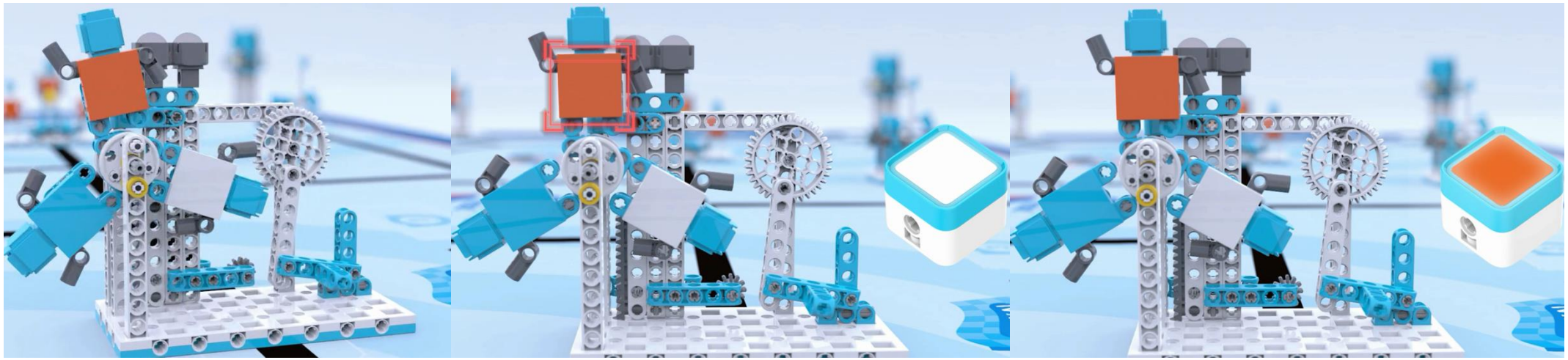


To watch detailed rule analysis, go to
https://www.youtube.com/watch?v=oitiXwSqGBM

To watch a demo, go to
https://www.youtube.com/watch?v=jn6KJHc9a2E

Task Analysis:
8-minute Showcase

Challenges

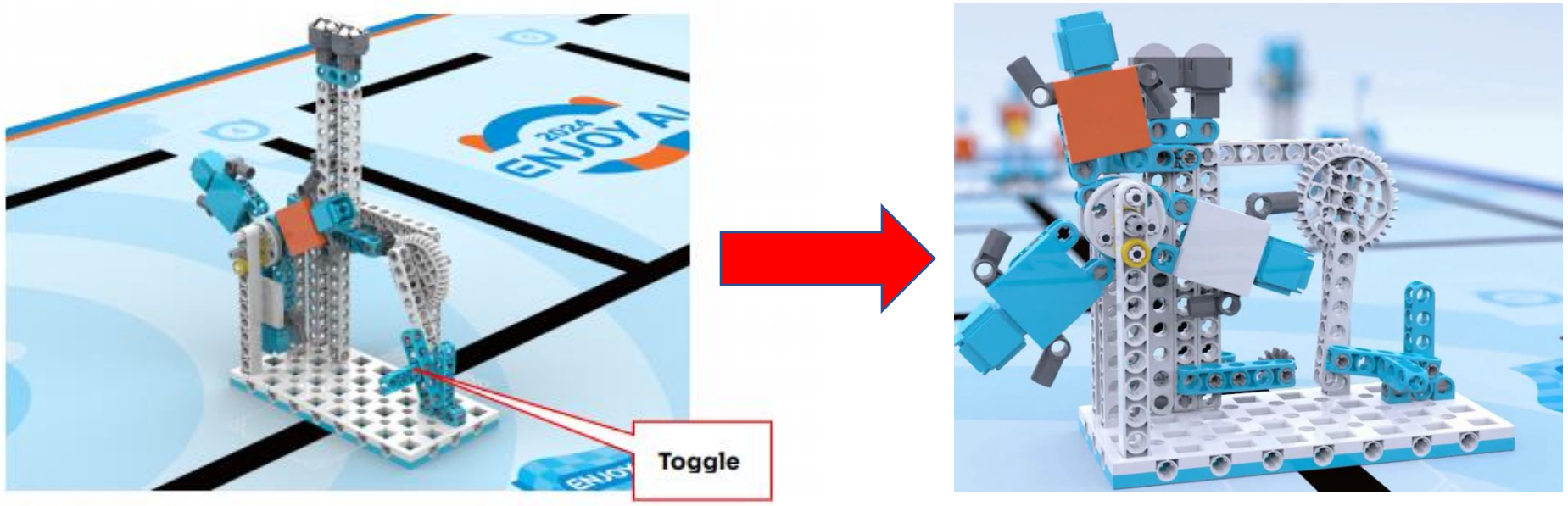


The robot needs to move the toggle first to make the performer rotate around the pulley. After the rotation stops, the color sensor identifies the clothing color of the highest performer, and then the indicator light shows the corresponding color for 2 seconds.

Challenges

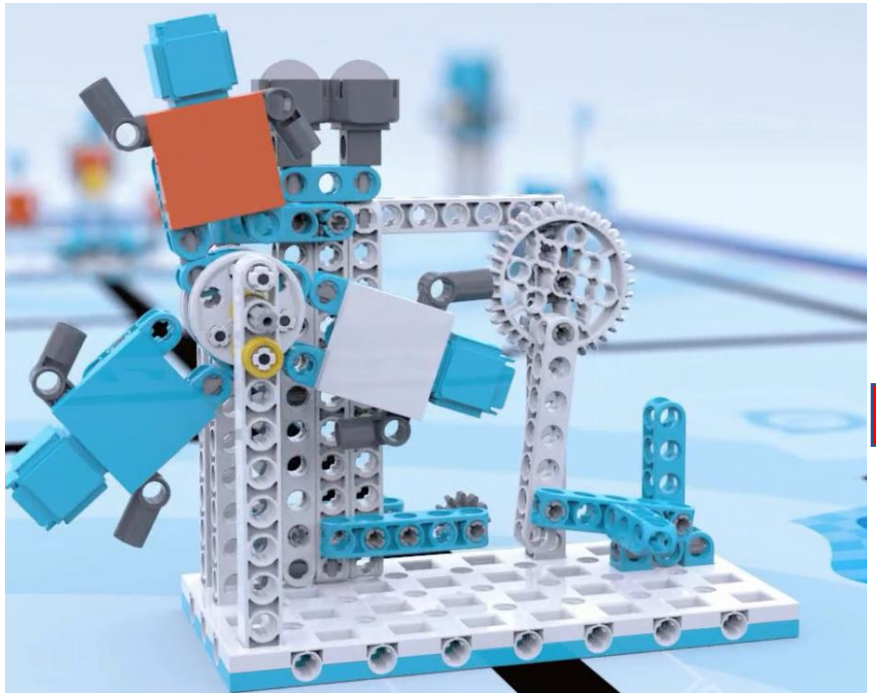
Everyone, before we start practicing this task, let’s learn how to win points in this task!

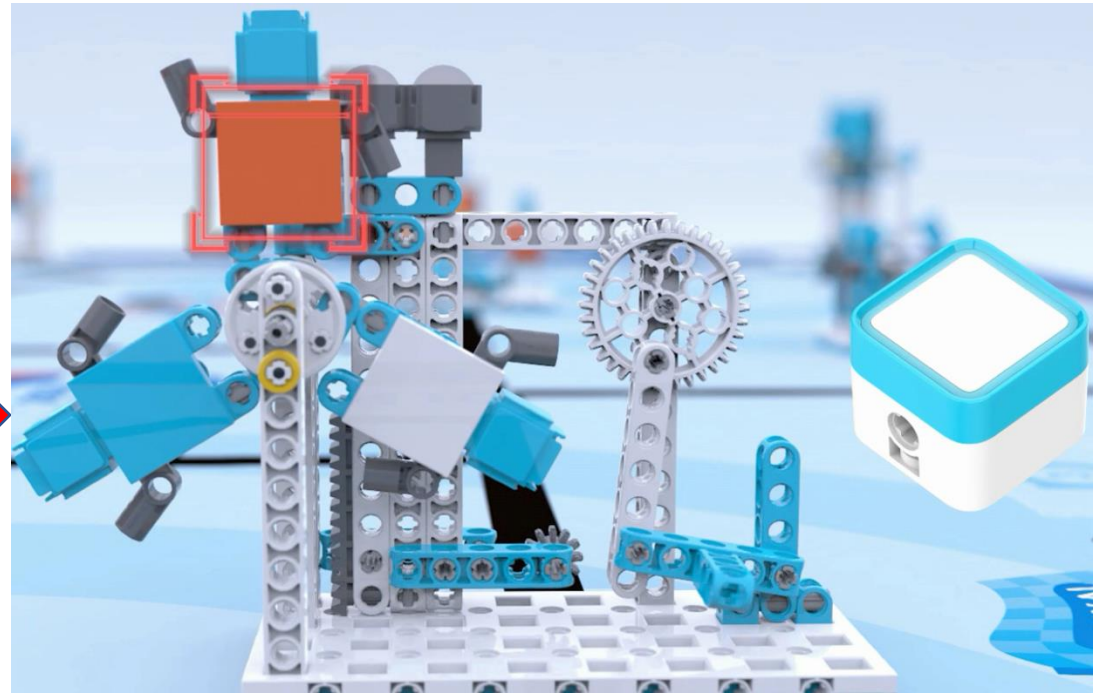
Challenges



1. Rotate the performer through the toggle.

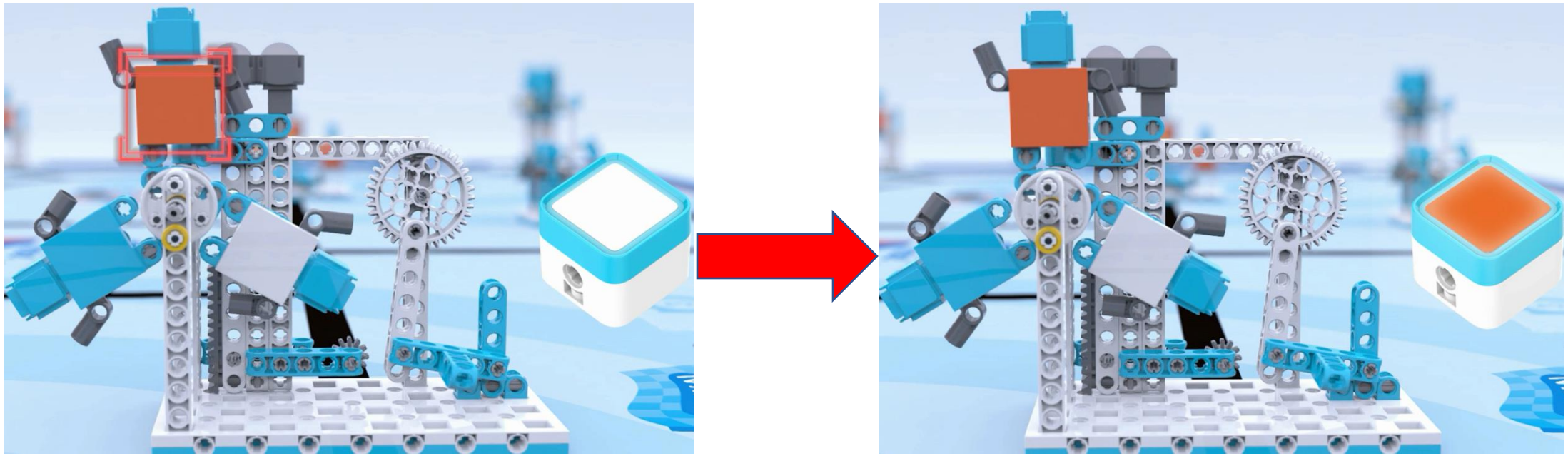
Challenges





2. Wait for the end of the performance, identify the clothing color of the performer on the top, and display the color through the indicator light.

Challenges



3. The color that has just been successfully identified should be displayed on the indicator for at least 2 seconds.

Challenges

So, how can we build our robot? What parts do we need?

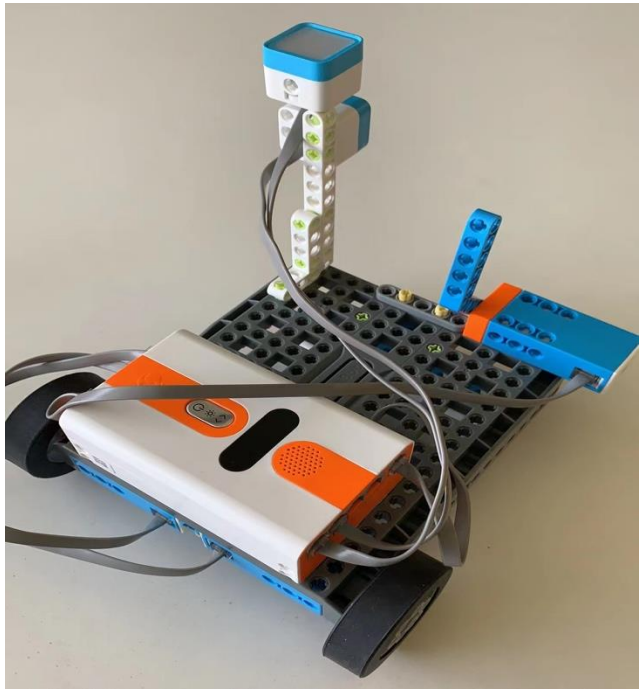
Challenges

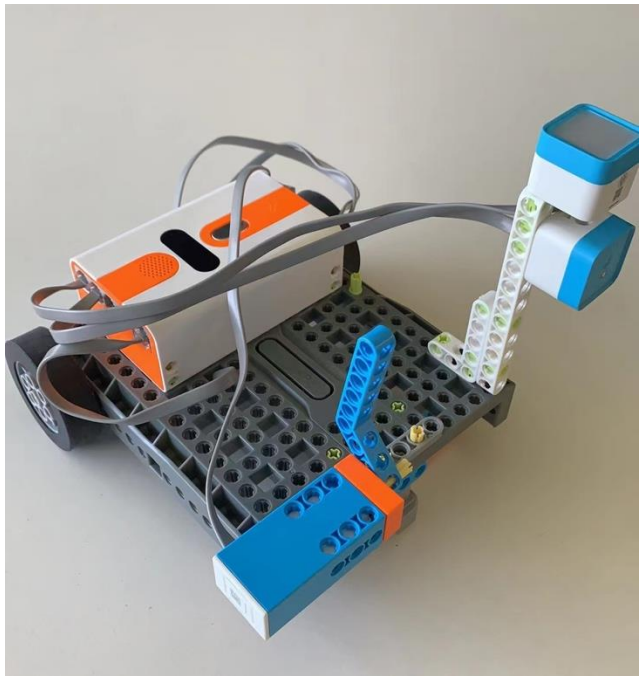
The robot must be able to do the following things:

1. Pull the toggle.
2. Wait for the rotation to stop and identify the clothing color of the performer.
3. Let the indicator light display color.

Try to design your robot!

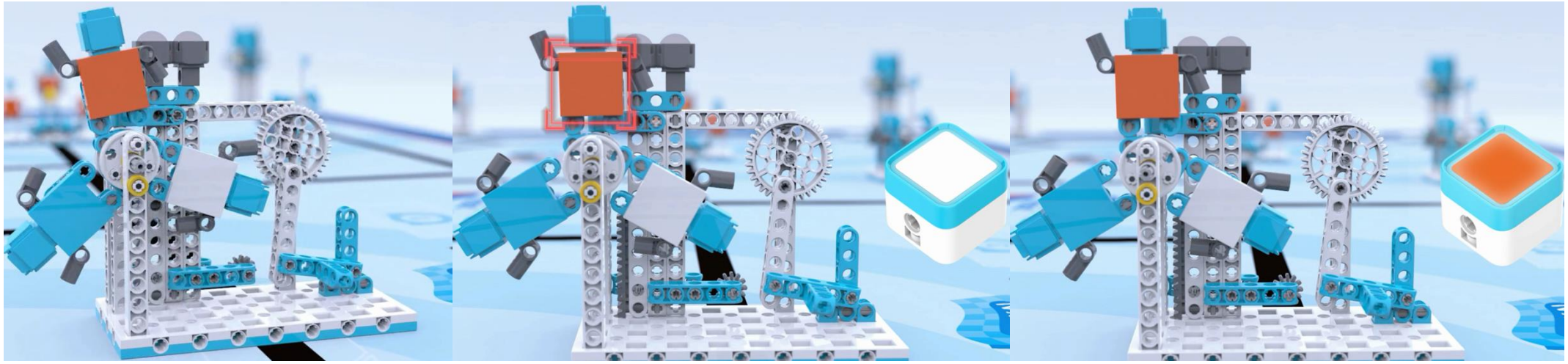
Challenges





Here’s our solution. Let’s install these parts and see what happens!

Challenges



Now, try to write a program to complete this task!

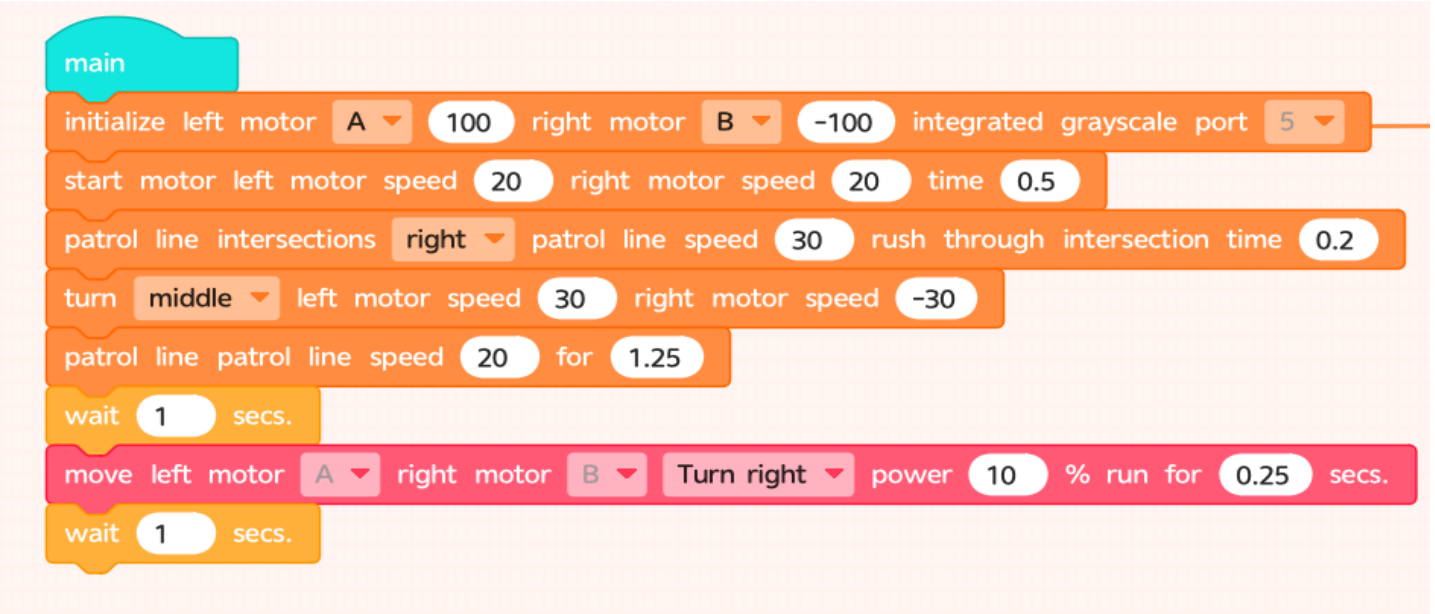
Challenges

The following video provides a demo of this task.

Challenges

Challenges

Set off

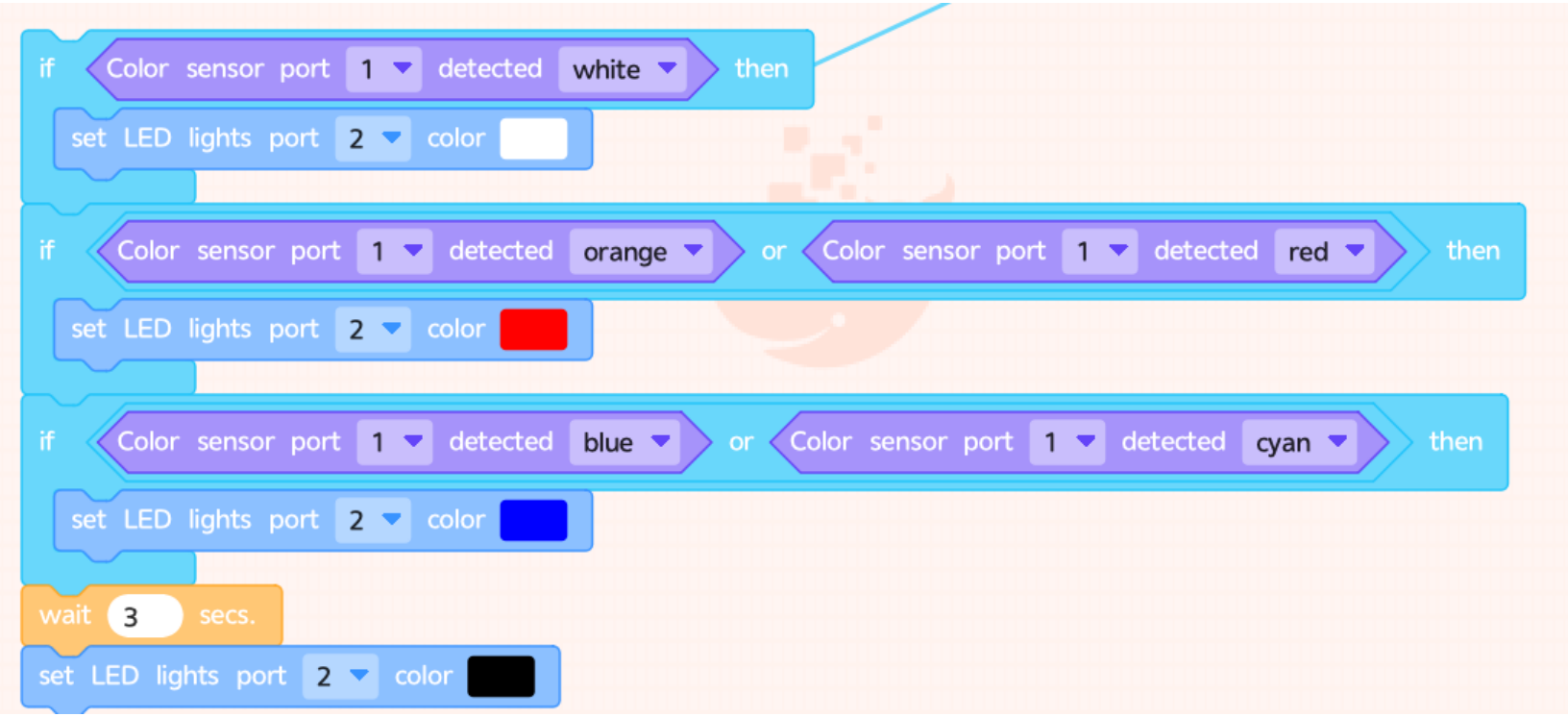


Challenges

Pull the toggle

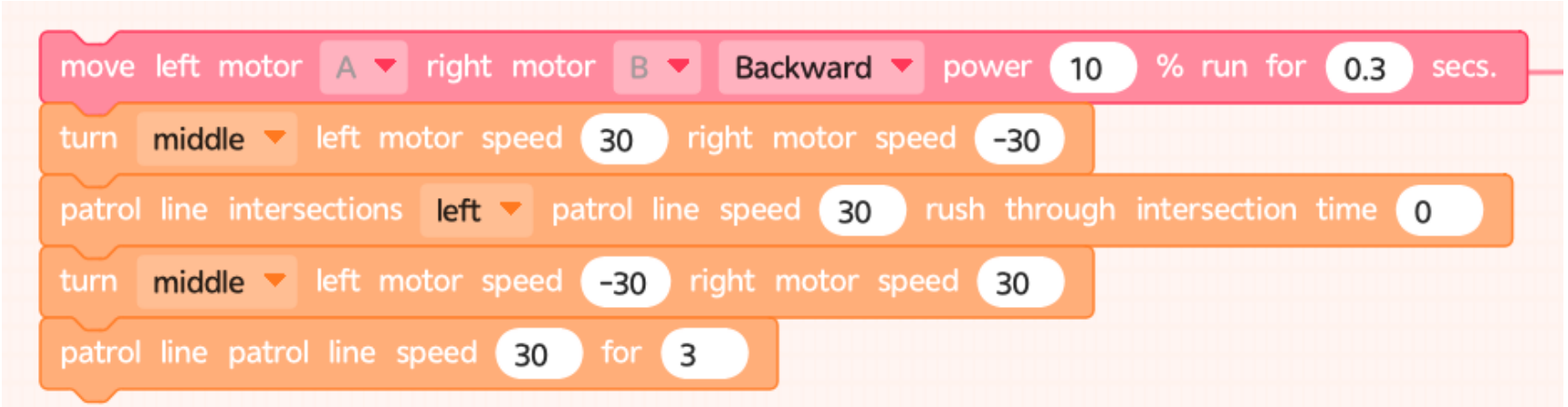
Challenges

Recognize clothing color



Challenges

Light off and return to base



Challenges

Challenges accepted!

Great! You've finished the task today. Let's spend the rest of the time practicing the task and see if we can finish it more quickly!

Let’s try to finish the task and then let the robot return to the base!

See you next time!