



GAR-GANTUAN CRUSADERS

GLORDON THE FARMING ROBOT

GAR Online International Robot Invention
Challenge (April-May, 2026)

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AISTEAM Project

Can a Robot Help Save Philippine Farming?

Farmers growing older, fewer people willing to work the fields, one bad harvest after another, these problems now shake farming across the Philippines. Out of that worry comes a thought: might a tiny machine, cheap enough to matter, take on planting duties?

A farmer without tech skills might find most robots tricky – yet here, two AISTEAS 101S kits change that story. Operation becomes straightforward when pieces fit like common farm tools. Maintenance? No specialist needed, just basic know-how handed down through practice. Repairs unfold naturally because parts stay visible, accessible. Each step leans on what people already do in barns and fields. Simplicity runs deep – not added, just uncovered.





Crisis Context

Philippine Agriculture Is Under Serious Threat

Ten million people in the Philippines earn their living from farming. During 2024, storms along with dry spells and crop sickness destroyed fields worth nearly 58 billion pesos. Harvests of rice dropped sharply, hitting the lowest point since four years back. Because local supply cannot keep up, imports jumped to four million metric tons. Trouble across farmland isn't new – lately, it's spreading.



The Crisis by the Numbers

Heavy storms, dry spells, and crop sickness cost the country huge losses last year. Old farmers keep working while younger ones stay away from the fields. The nation bought more rice from abroad than at any time before. New tools that small farms can actually afford could make a real difference. Tough times call for smarter ways to grow food.



₱57.8B



55+



1.4M



4M MT



Our Team and How We Worked Together

Our team worked collaboratively, making decisions together through open discussion. Each member brought unique skills while supporting others, ensuring the project reflected everyone's contributions and ideas.

Designer and Builder



Programmer and Video Editor



Designer and Builder





Main Control Board (2x) — The brain that processes commands and coordinates all robot functions, one in the top, and one in the bottom



Drive Motors (4x) — Powers the wheels for movement in all directions across farm terrain



Seed Dropper Motor (1x) — Releases seeds at precise intervals for even planting distribution, using ordinary nitir



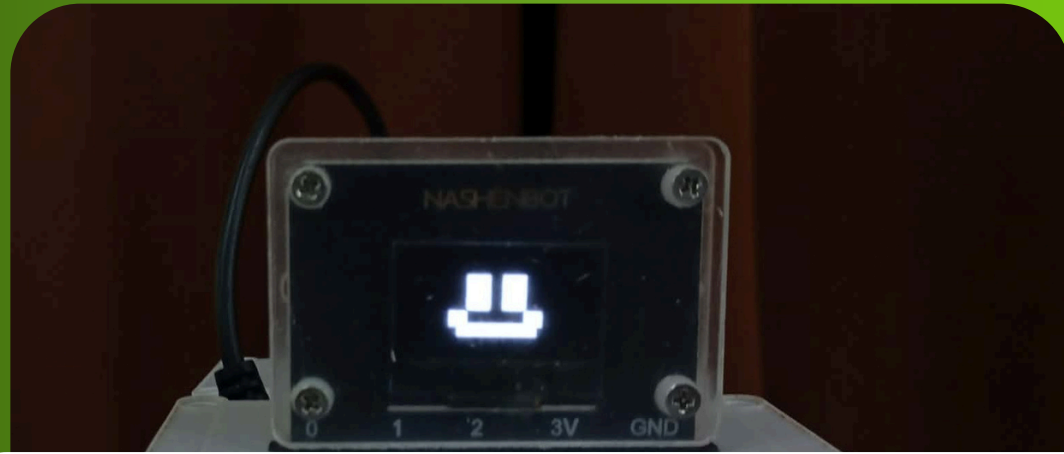
LED Display, Battery, Wheels & Chassis — Shows status, provides energy, and forms the sturdy frame

What the Robot Is Made Of

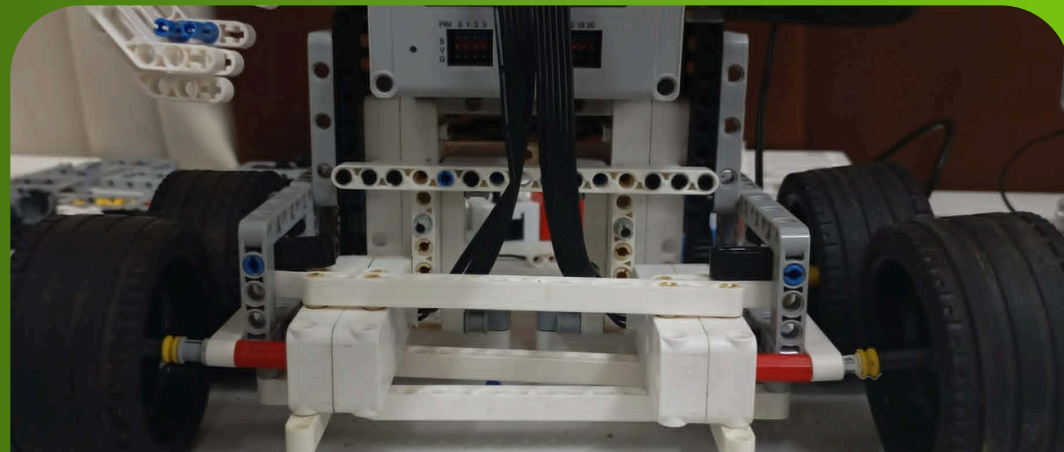
The AISTEAM 101S farming robot is built from simple, affordable components that can be sourced locally and repaired by anyone. Using parts from two AISTEAM 101S kits, the robot combines accessible technology with practical farming functionality, making it ideal for non-technical Filipino farmers who need reliable, low-cost solutions.



AISTEAM 101S



Friendly LED Face Display



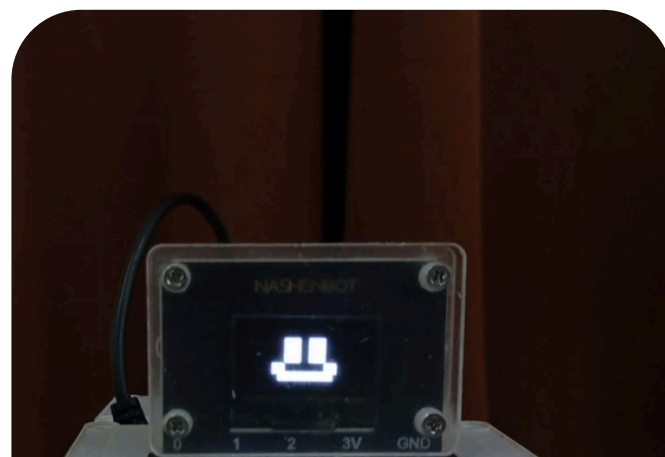
Four Wheel Robot

Meet, Glordon The Farming Robot

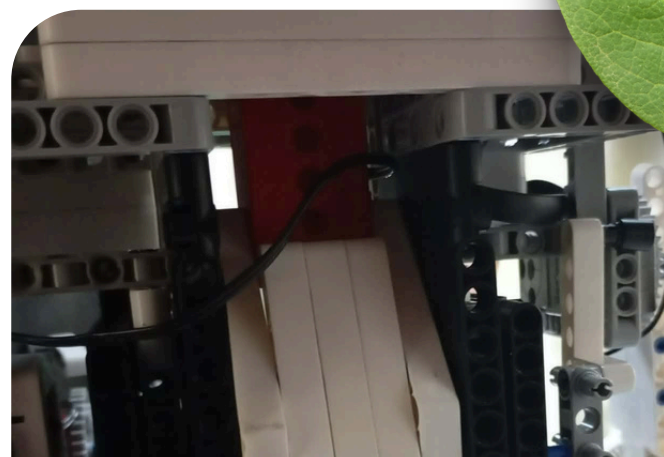
A little green machine takes shape using only two low-cost sets. Its cheerful eyes glow through an LED display, telling you what it is doing. Instead of complex gears, wheels move it across wet fields where rice grows. A spinning arm drops seeds at steady intervals while motors keep things running. Farmers in the Philippines inspired its form and function. Fixing it does not demand special knowledge or tools. Anyone can handle upkeep without help from experts.



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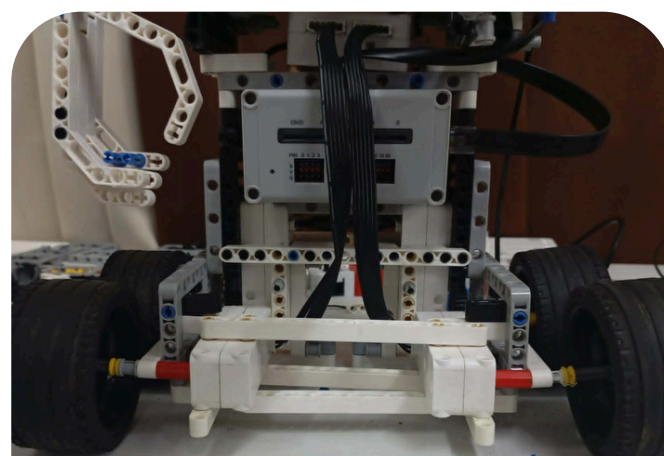
LED Face



Seed Dropper



2 Kits



4 Wheel

What the Robot Can Do

From headlight eyes to steady planting hands, the AISTEAM 101S suits compact farms well. Those glowing facial cues? They show activity without words. As it rolls forward, tiny seeds drop one after another thanks to a timed release slot. Motion comes from four motors spinning separate wheels – this setup crawls sideways, backward, or straight ahead with equal ease. Two basic kit frames hold everything together, meaning fixes take little time or skill.



How the Robot Was Built?



Step 1: Start at the Core

Main controller placed first — the brain of the robot. Expansion board mounted alongside as the wiring hub. Battery secured to complete the core.



Step 2: Build the Drive System

Two encoder motors installed — one on each side — with a wheel each. Designed for reliable movement on uneven, narrow paths between crop rows.



Step 3: Attach the Seeding Mechanism

Standard motor mounted at the rear. Releases seeds at even intervals as the robot moves forward. Rate controlled by motor speed — consistent every time.



Step 4: Mount the LED Display

The robot's face. Shows a clear expression so farmers — 55+ years old, many new to technology — can read status without manuals or codes.





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The Robot in Operation



Power On & Activate

The robot powers on and the LED display activates, showing its status face. Every action from this point is driven by the controller.



Move & Plant in Straight Lines

Encoder motors pull the robot forward in a controlled straight line — no wobble, no drift. Seeds drop at fixed, steady intervals. Consistent spacing every single row.



Turn & Begin Next Row

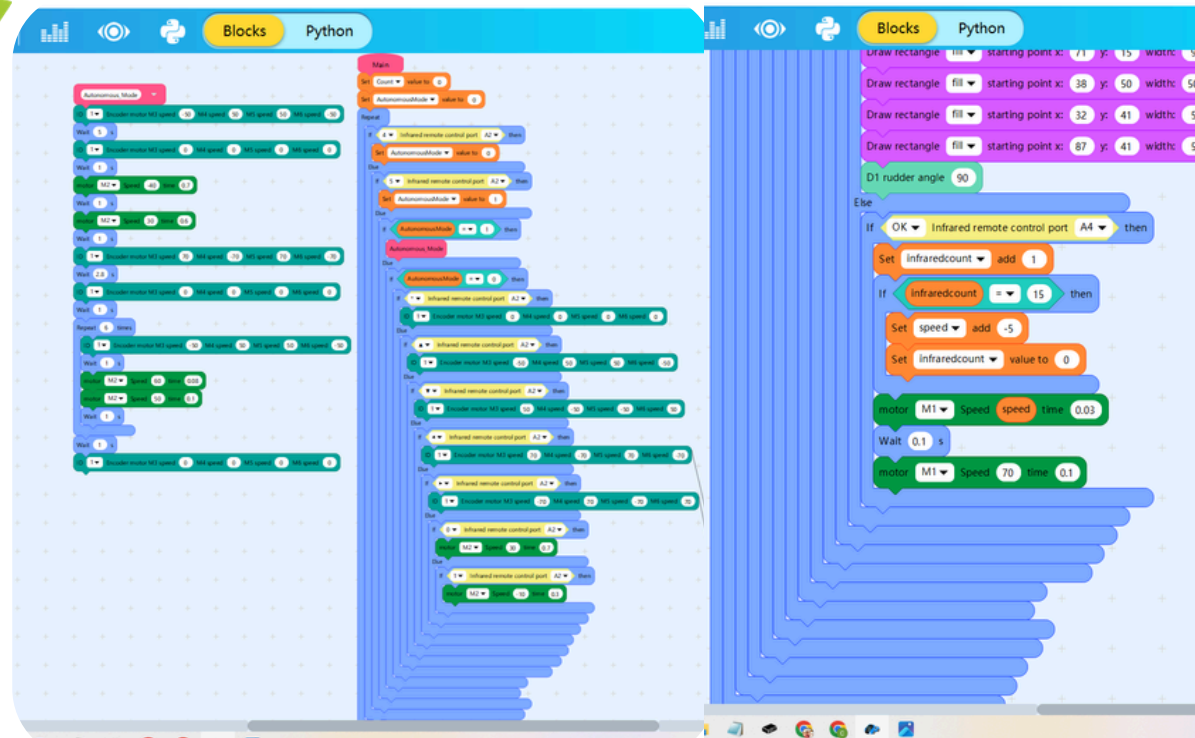
The two-motor drive pivots cleanly without a wide arc — staying within tightly spaced rows. It plants continuously: no rest, no water, no losing its place.





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How the Robot Thinks and Moves



Wheel Control Logic

The robot uses block-based coding for easy programming. Four wheel drive motors control direction — forward, backward, and turning. The seed dropper motor activates at timed intervals for even planting.



System Flowchart

Using 2 microcontroller, one in the top for face and the hand and one in the bottom for the 4 motors, it can be autonomous and remote controlled



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Main

Set Count value to 0

Set AutonomousMode value to 0

Repeat

If 4 Infrared remote control port A2 then

Set AutonomousMode value to 0

Else

If 5 Infrared remote control port A2 then

Set AutonomousMode value to 1

Else

If AutonomousMode = 1 then

Autonomous_Mode

Else

If AutonomousMode = 0 then

If * Infrared remote control port A2 then

ID 1 Encoder motor M3 speed 0 M4 speed 0 M5 speed 0 M6 speed 0

Else

If ▲ Infrared remote control port A2 then

ID 1 Encoder motor M3 speed -50 M4 speed 50 M5 speed 50 M6 speed -50

Else

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Turn right

Turn left

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The image displays a screenshot of the Alcode programming environment, showing a complex block-based code structure. The code is organized into a series of nested 'If' and 'Else' blocks, primarily using the 'Infrared remote control port A2' as a trigger. The code controls six motors (M3, M4, M5, M6) and includes a 'motor M2' block. The code is written in a visual programming style, with blocks connected by lines. The interface includes a menu bar with 'File', 'Setting', and 'Help', and a sidebar with categories like 'Programming', 'Motion', 'Interaction', 'Intelligent Speech', 'Vision', and 'Pilotless'. The bottom status bar shows system information: '31°C Partly cloudy', '8:08 pm', and '27/04/2026'.

```
graph TD
    Start(( )) --> SetM3M4M5M6[Encoder motor M3 speed 0 M4 speed 0 M5 speed 0 M6 speed 0]
    SetM3M4M5M6 --> IfA2_1{Infrared remote control port A2}
    IfA2_1 --> SetM3M4M5M6_1[Encoder motor M3 speed -50 M4 speed 50 M5 speed 50 M6 speed -50]
    SetM3M4M5M6_1 --> IfA2_2{Infrared remote control port A2}
    IfA2_2 --> SetM3M4M5M6_2[Encoder motor M3 speed 50 M4 speed -50 M5 speed -50 M6 speed 50]
    SetM3M4M5M6_2 --> IfA2_3{Infrared remote control port A2}
    IfA2_3 --> SetM3M4M5M6_3[Encoder motor M3 speed 70 M4 speed -70 M5 speed 70 M6 speed -70]
    SetM3M4M5M6_3 --> IfA2_4{Infrared remote control port A2}
    IfA2_4 --> SetM3M4M5M6_4[Encoder motor M3 speed -70 M4 speed 70 M5 speed -70 M6 speed 70]
    SetM3M4M5M6_4 --> IfA2_5{Infrared remote control port A2}
    IfA2_5 --> MotorM2_1[motor M2 Speed 30 time 0.7]
    MotorM2_1 --> IfA2_6{Infrared remote control port A2}
    IfA2_6 --> MotorM2_2[motor M2 Speed -10 time 0.3]
    MotorM2_2 --> End(( ))
```



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speed 0

turn left

M5 speed 50 M6 speed -50

M5 speed 0 M6 speed 0

ID 1 Encoder motor M3 speed -50 M4 speed 50 M5 speed 50 M6 speed -50

Else

If Infrared remote control port A2 then

ID 1 Encoder motor M3 speed 50 M4 speed -50 M5 speed -50 M6 speed 50

Else

If Infrared remote control port A2 then

ID 1 Encoder motor M3 speed 70 M4 speed -70 M5 speed 70 M6 speed -70

Else

If Infrared remote control port A2 then

ID 1 Encoder motor M3 speed -70 M4 speed 70 M5 speed -70 M6 speed 70

Else

If 0 Infrared remote control port A2 then

motor M2 Speed 30 time 0.7

Else

If 1 Infrared remote control port A2 then

motor M2 Speed -10 time 0.3

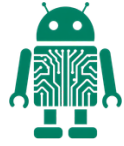
Turn right

Turn left

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The screenshot displays the Alcode programming interface with a sequence of blocks for controlling a robot's movement. The blocks are as follows:

- Autonomous_Mode** (Pink block)
- ID 1 Encoder motor M3 speed -50 M4 speed 50 M5 speed 50 M6 speed -50** (Teal block)
- Wait 5 s** (Blue block)
- ID 1 Encoder motor M3 speed 0 M4 speed 0 M5 speed 0 M6 speed 0** (Teal block)
- Wait 1 s** (Blue block)
- motor M2 Speed -40 time 0.7** (Green block)
- Wait 1 s** (Blue block)
- motor M2 Speed 30 time 0.6** (Green block)
- Wait 1 s** (Blue block)
- ID 1 Encoder motor M3 speed 70 M4 speed -70 M5 speed 70 M6 speed -70** (Teal block)
- Wait 2.8 s** (Blue block)
- ID 1 Encoder motor M3 speed 0 M4 speed 0 M5 speed 0 M6 speed 0** (Teal block)
- Wait 1 s** (Blue block)
- Repeat 6 times** (Blue block)
- ID 1 Encoder motor M3 speed -50 M4 speed 50 M5 speed 50 M6 speed -50** (Teal block)
- Wait 1 s** (Blue block)
- motor M2 Speed 60 time 0.08** (Green block)

A callout box labeled "Turn right" points to the motor block with speed 30. The right sidebar shows a "Main" section with "Set Count" and "Set Autonom" blocks, followed by a "Repeat" loop containing "If" and "Else" blocks. The bottom status bar shows the system time as 8:08 pm on 27/04/2026 and the weather as 31°C Partly cloudy.



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motor M2 Speed 30 time 0.6

Wait 1 s

ID 1 Encoder motor M3 speed 70 M4 speed -70 M5 speed 70 M6 speed -70

Wait 2.8 s

ID 1 Encoder motor M3 speed 0 M4 speed 0 M5 speed 0 M6 speed 0

Wait 1 s

Repeat 6 times

ID 1 Encoder motor M3 speed -50 M4 speed 50 M5 speed 50 M6 speed -50

Wait 1 s

motor M2 Speed 60 time 0.08

motor M2 Speed 50 time 0.1

Wait 1 s

Wait 1 s

ID 1 Encoder motor M3 speed 0 M4 speed 0 M5 speed 0 M6 speed 0

Turn right

Else

If

Auto

Else

If

If

Else

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The screenshot displays the Alcode programming environment with three scripts visible:

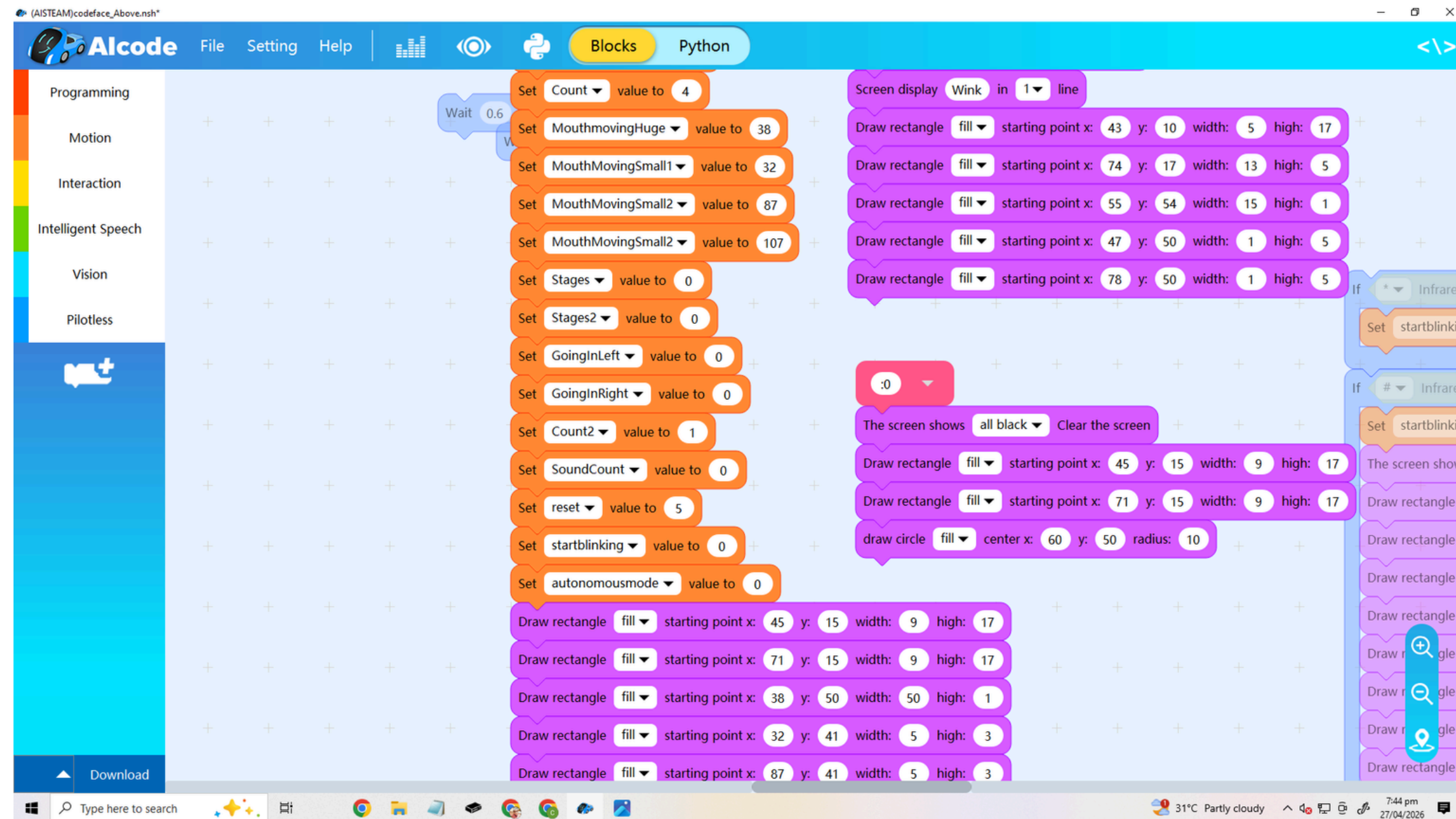
- Autonomous_Mode:** A sequence of blocks including 'D1 rudder angle' (90), 'oneblink', 'oneblink', 'Wait 1 s', 'D1 rudder angle' (180), 'oneblink', 'oneblink', and 'Wait 1 s'.
- Main:** A sequence of blocks including 'The screen shows all black', 'Clear the screen', 'Set infraredcount value to 0', 'Set speed value to -30', 'Set EyeLeftStartingPos value to 47', 'Set EyeRightStartingPos value to 73', 'Set MovingEyeLeft value to 47', 'Set MovingEyeRight value to 73', 'Set EyeHigh value to 17', 'Set Count value to 4', 'Set MouthmovingHuge value to 38', 'Set MouthMovingSmall1 value to 32', 'Set MouthMovingSmall2 value to 87', 'Set MouthMovingSmall2 value to 107', 'Set Stages value to 0', 'Set Stages2 value to 0', 'Set GoingInLeft value to 0', 'Set GoingInRight value to 0', and 'Set Count2 value to 1'.
- Blee:** A sequence of blocks including 'The screen shows all black', 'Clear the screen', 'Screen display Blee in 1 line', 'Draw rectangle fill starting point x: 43 y: 17 width: 13 high: 4', 'Draw rectangle fill starting point x: 69 y: 17 width: 13 high: 4', 'Draw rectangle fill starting point x: 45 y: 43 width: 35 high: 1', 'draw circle fill center x: 62 y: 47 radius: 7', 'Draw rectangle fill starting point x: 37 y: 38 width: 5 high: 3', and 'Draw rectangle fill starting point x: 80 y: 38 width: 5 high: 3'.
- Wink ;]:** A sequence of blocks including 'The screen shows all black', 'Clear the screen', 'Screen display Wink in 1 line', 'Draw rectangle fill starting point x: 43 y: 10 width: 5 high: 17', 'Draw rectangle fill starting point x: 74 y: 17 width: 13 high: 5', 'Draw rectangle fill starting point x: 55 y: 54 width: 15 high: 1', and 'Draw rectangle fill starting point x: 47 y: 50 width: 1 high: 5'.

The status bar at the bottom shows system information: 31°C, Partly cloudy, 7:43 pm, 27/04/2026.



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Turn on the buzzer Port A4 Note C1 Beat 1/

Wait until

Repeat

If # Infrared remote control port A1 then

Song

Else

If 0 Infrared remote control port A1 then

The screen shows all black Clear the screen

Draw rectangle fill starting point x: 45 y: 15 width: 9 high: 17

Draw rectangle fill starting point x: 71 y: 15 width: 9 high: 17

draw circle fill center x: 60 y: 50 radius: 10

Else

If 1 Infrared remote control port A1 then

The screen shows all black Clear the screen

Draw rectangle fill starting point x: 45 y: 15 width: 9 high: 17

Draw rectangle fill starting point x: 71 y: 15 width: 9 high: 17

Draw rectangle fill starting point x: 38 y: 50 width: 50 high: 1

Draw rectangle fill starting point x: 32 y: 41 width: 5 high: 3

Draw rectangle fill starting point x: 87 y: 41 width: 5 high: 3

Wait 3 s

Wait 3 s

If startblinking = 1

Blinking eyes

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Draw rectangle fill starting point x: 45 y: 15 width: 9 high: 17

Draw rectangle fill starting point x: 71 y: 15 width: 9 high: 17

Draw rectangle fill starting point x: 38 y: 50 width: 50 high: 1

Draw rectangle fill starting point x: 32 y: 41 width: 5 high: 3

Draw rectangle fill starting point x: 87 y: 41 width: 5 high: 3

Else

If 4 Infrared remote control port A1 then

Set autonomousmode value to 0

Else

If 5 Infrared remote control port A1 then

Set autonomousmode value to 1

Else

If autonomousmode = 1 then

Autonomous_Mode

Else

If autonomousmode = 0 then

If 6 Infrared remote control port A1 then

oneblink

Else

If 7 Infrared remote control port A1 then

If startblinking = 1

Blinking eyes

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If **autonomousmode** = 0 then

If 6 Infrared remote control port A1 then

oneblink

Else

If 7 Infrared remote control port A1 then

D1 rudder angle 40

Else

If 8 Infrared remote control port A1 then

D1 rudder angle 90

Else

If 9 Infrared remote control port A1 then

D1 rudder angle 180

The screen shows all black Clear the screen

Screen display HELLO in coordinateX: 38 Y: 22 Preview

Turn on the buzzer Port A4 Note C4 Beat 1/4 int value to 0

Turn on the buzzer Port A4 Note C3 Beat 1/2

Wait 2 s

The screen shows all black Clear the screen

Draw rectangle fill starting point x: 45 y: 15 width: 9 high: 17

Draw rectangle fill starting point x: 71 y: 15 width: 9 high: 17

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Turn on the buzzer Port A4 Note C3 Beat 1/2

Wait 2 s

The screen shows all black Clear the screen

Draw rectangle fill starting point x: 45 y: 15 width: 9 high: 17

Draw rectangle fill starting point x: 71 y: 15 width: 9 high: 17

Draw rectangle fill starting point x: 38 y: 50 width: 50 high: 1

Draw rectangle fill starting point x: 32 y: 41 width: 5 high: 3

Draw rectangle fill starting point x: 87 y: 41 width: 5 high: 3

D1 rudder angle 90

Else

If OK Infrared remote control port A4 then

Set infraredcount add 1

If infraredcount = 15 then

Set speed add -5

Set infraredcount value to 0

motor M1 Speed speed time 0.03

Wait 0.1 s

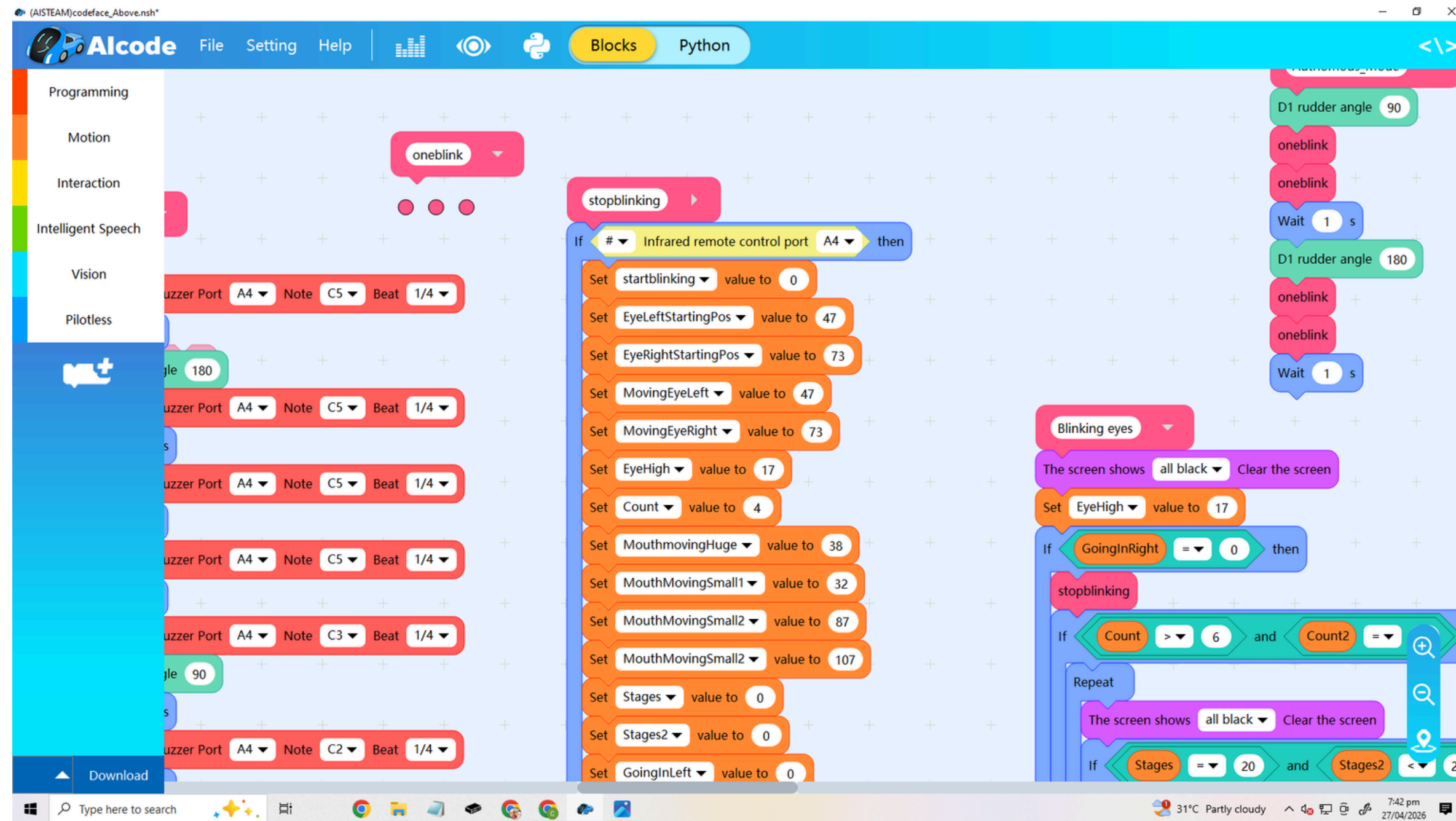
motor M1 Speed 70 time 0.1

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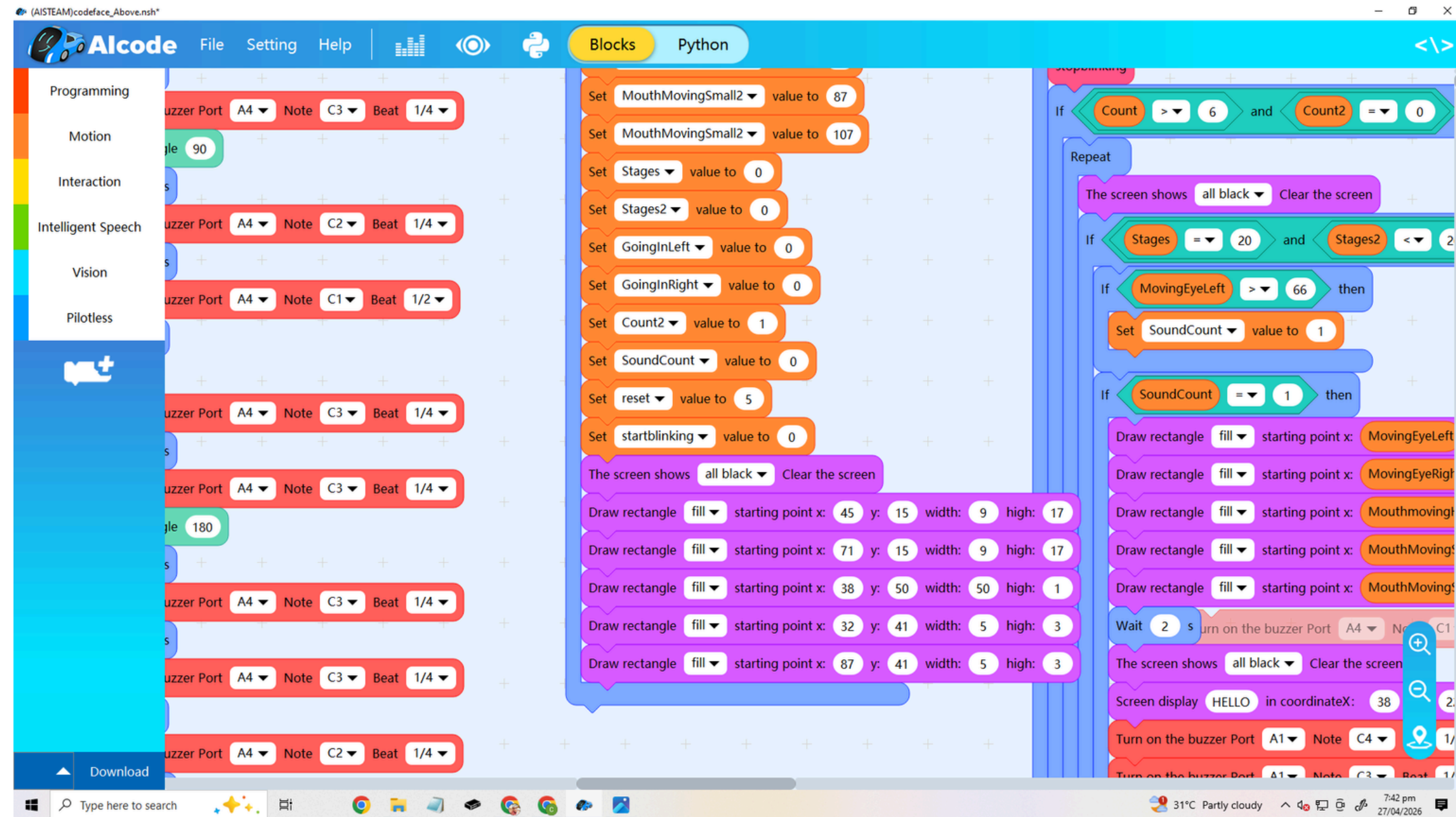
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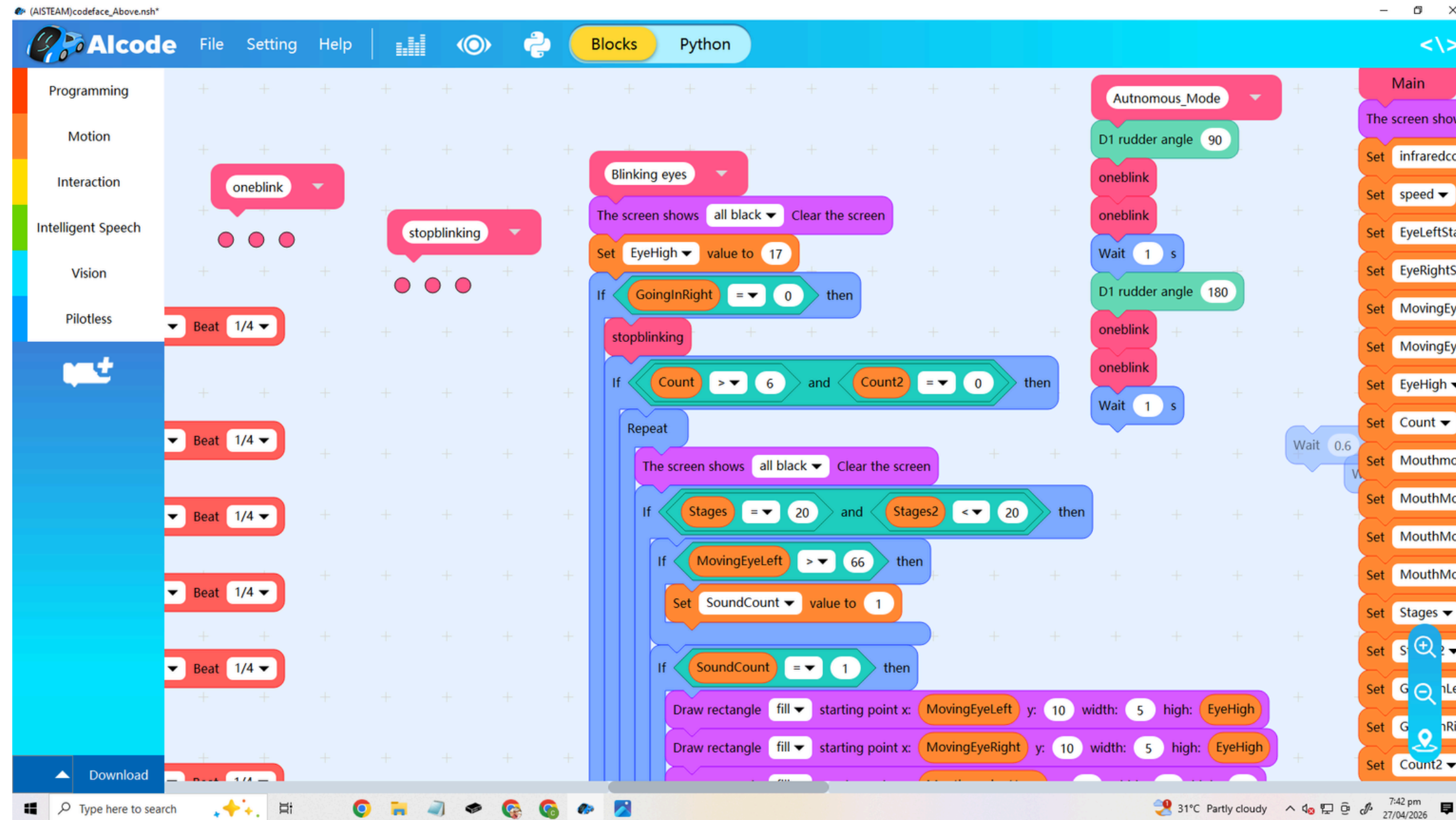
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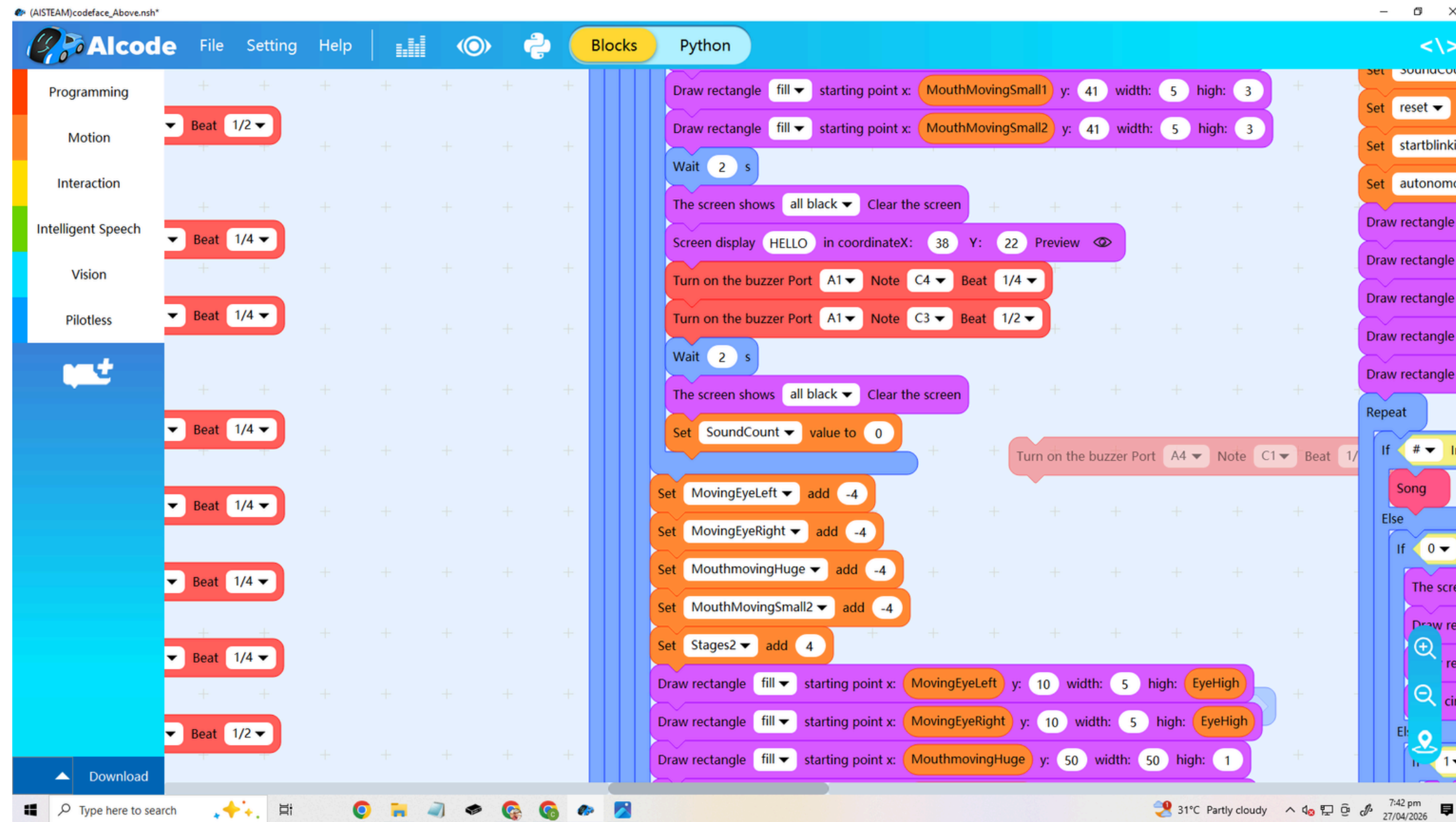
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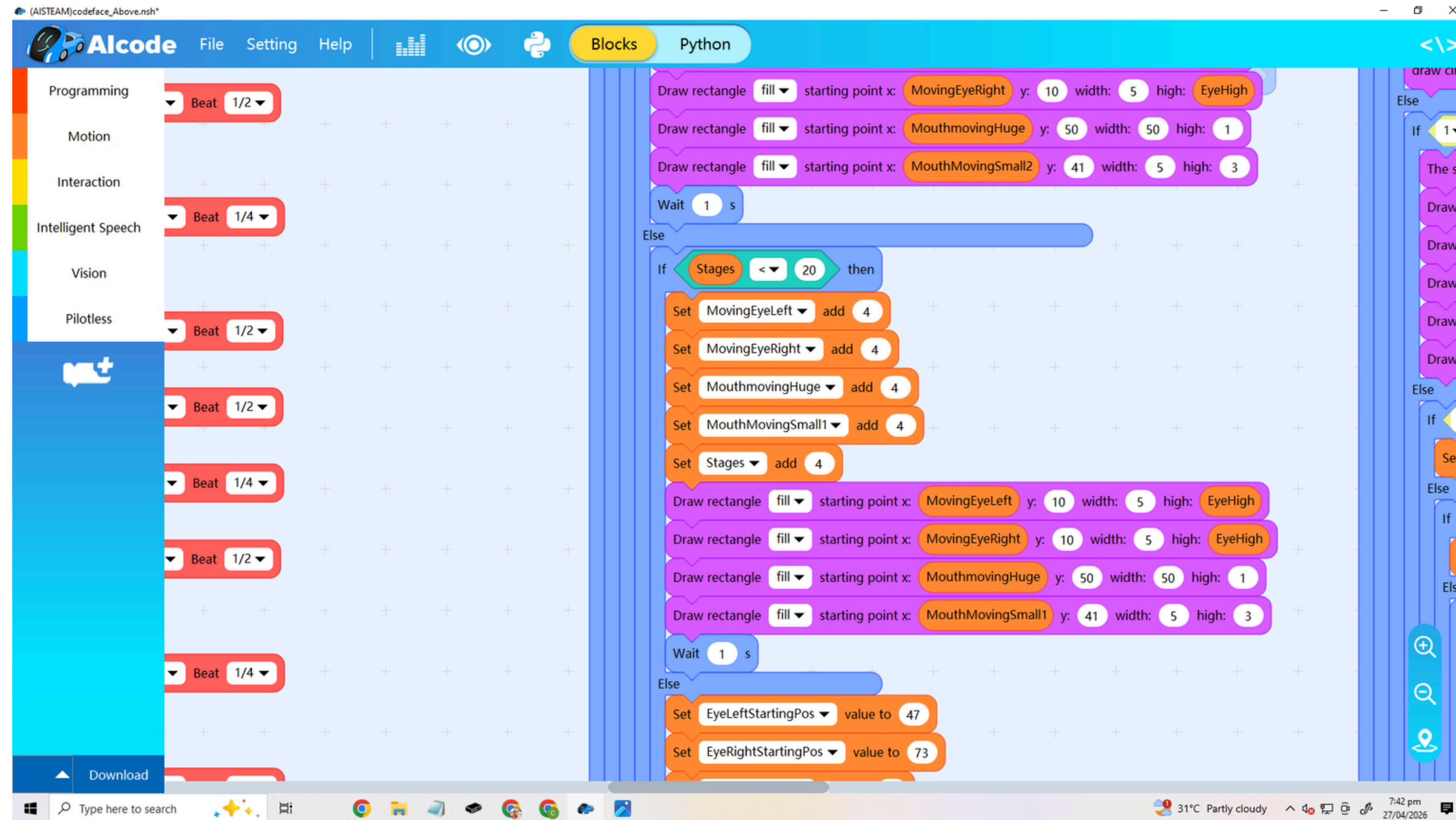
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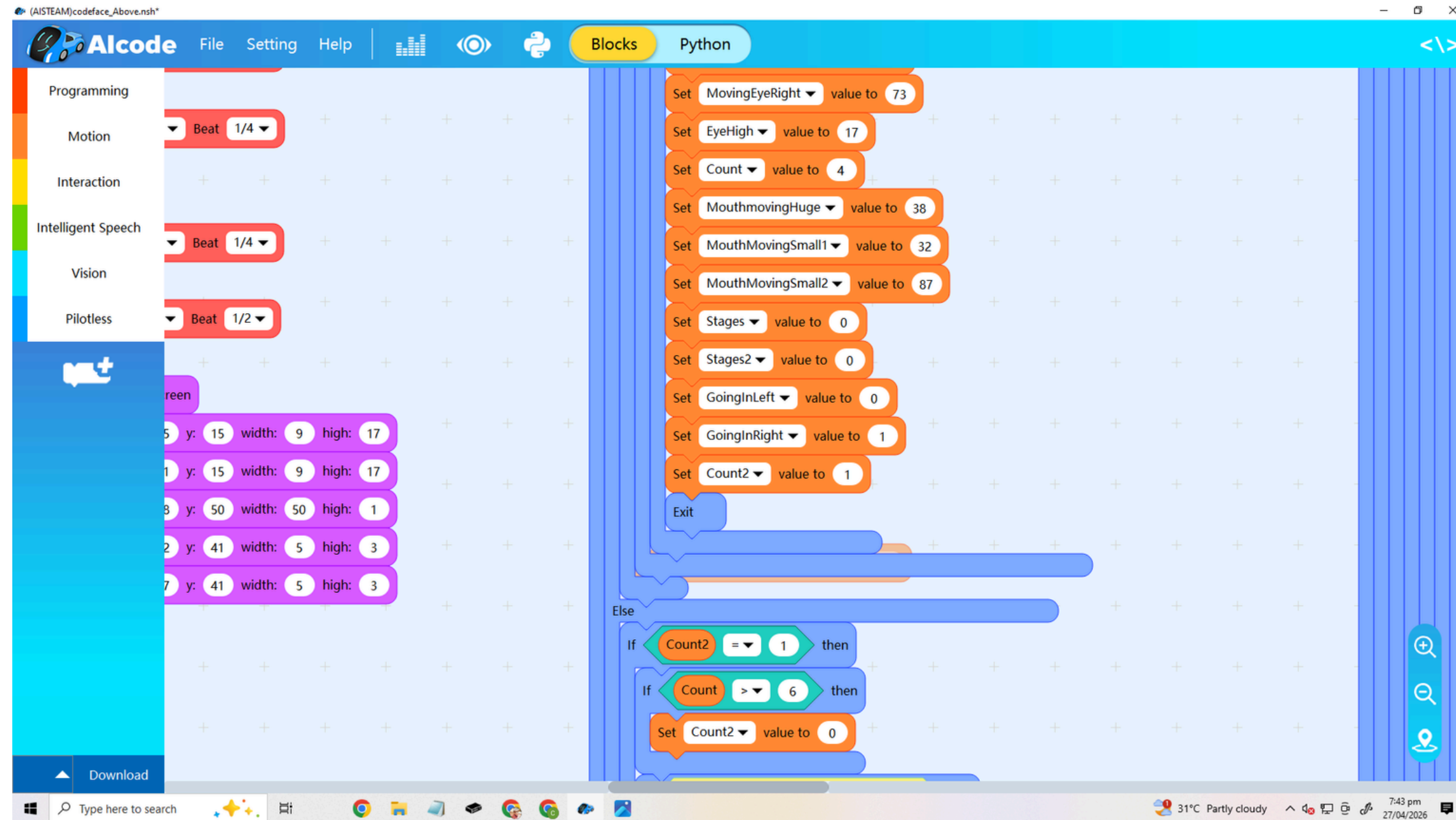
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```
Set Count2 value to 0
If # Infrared remote control port A4 then
  Set startblinking value to 0
  The screen shows all black Clear the screen
  Draw rectangle fill starting point x: 45 y: 15 width: 9 high: 17
  Draw rectangle fill starting point x: 71 y: 15 width: 9 high: 17
  Draw rectangle fill starting point x: 38 y: 50 width: 50 high: 1
  Draw rectangle fill starting point x: 32 y: 41 width: 5 high: 3
  Draw rectangle fill starting point x: 87 y: 41 width: 5 high: 3
  Draw rectangle fill starting point x: EyeLeftStartingPos y: 10 width: 5 high: EyeHigh
  Draw rectangle fill starting point x: EyeRightStartingPos y: 10 width: 5 high: EyeHigh
  Draw rectangle fill starting point x: 38 y: 50 width: 50 high: 1
  Draw rectangle fill starting point x: 32 y: 41 width: 5 high: 3
  Draw rectangle fill starting point x: 87 y: 41 width: 5 high: 3
  Wait 1 s
  The screen shows all black Clear the screen
  Set EyeHigh value to 4
```

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The screen shows all black Clear the screen

Set EyeHigh value to 4

Draw rectangle fill starting point x: 45 y: 15 width: 9 high: EyeHigh

Draw rectangle fill starting point x: 71 y: 15 width: 9 high: EyeHigh

Draw rectangle fill starting point x: 38 y: 50 width: 50 high: 1

Draw rectangle fill starting point x: 32 y: 41 width: 5 high: 3

Draw rectangle fill starting point x: 87 y: 41 width: 5 high: 3

Wait 1 s

Set Count add 1

If GoingInRight = 1 then

stopblinking

If Count > 6 and Count2 = 0 then

Repeat

The screen shows all black Clear the screen

If Stages2 = 20 and reset > 1 then

Set SoundCount add 1

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Repeat

The screen shows all black Clear the screen

If Stages2 = 20 and reset > 1 then

Set SoundCount add 1

If SoundCount = 1 then

Draw rectangle fill starting point x: MovingEyeLeft y: 10 width: 5 high: 17

Draw rectangle fill starting point x: MovingEyeRight y: 10 width: 5 high: 17

Draw rectangle fill starting point x: MouthmovingHuge y: 50 width: 50 high: 1

Draw rectangle fill starting point x: MouthMovingSmall1 y: 41 width: 5 high: 3

Draw rectangle fill starting point x: MouthMovingSmall2 y: 41 width: 5 high: 3

Wait 2 s

The screen shows all black Clear the screen

Screen display HELLO in coordinateX: 38 Y: 22 Preview

Turn on the buzzer Port A1 Note C4 Beat 1/4

Turn on the buzzer Port A1 Note C3 Beat 1/2

Wait 2 s

The screen shows all black Clear the screen

Set SoundCount value to 0

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The screenshot displays the Alcode programming interface with the following blocks in sequence:

- Screen display: HELLO in coordinates: 30 17 22 (Preview)
- Turn on the buzzer Port A1 Note C4 Beat 1/4
- Turn on the buzzer Port A1 Note C3 Beat 1/2
- Wait 2 s
- The screen shows all black Clear the screen
- Set SoundCount value to 2
- Set MovingEyeLeft add 4
- Set MovingEyeRight add 4
- Set MouthmovingHuge add 4
- Set MouthMovingSmall1 add 4
- Set reset add -1
- Draw rectangle fill starting point x: MovingEyeLeft y: 10 width: 5 high: 17
- Draw rectangle fill starting point x: MovingEyeRight y: 10 width: 5 high: 17
- Draw rectangle fill starting point x: MouthmovingHuge y: 50 width: 50 high: 1
- Draw rectangle fill starting point x: MouthMovingSmall1 y: 41 width: 5 high: 3
- Wait 1 s
- Else
- If Stages < 19 or Stages2 = 22 then
- Set MovingEyeLeft add -4

The interface includes a left sidebar with categories: Programming, Motion, Interaction, Intelligent Speech, Vision, and Pilotless. The bottom status bar shows the system time as 7:43 pm on 27/04/2026 and the weather as 31°C Partly cloudy.



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Draw rectangle fill starting point x: MouthMovingSmall1 y: 41 width: 5 high: 3

Wait 1 s

Else

If Stages < 19 or Stages2 = 22 then

Set MovingEyeLeft add -4

Set MovingEyeRight add -4

Set MouthmovingHuge add -4

Set MouthMovingSmall2 add -4

Set MouthMovingSmall1 add -4

Set Stages add 4

Set Stages2 add 4

Draw rectangle fill starting point x: MovingEyeLeft y: 10 width: 5 high: 17

Draw rectangle fill starting point x: MovingEyeRight y: 10 width: 5 high: 17

Draw rectangle fill starting point x: MouthmovingHuge y: 50 width: 50 high: 1

Draw rectangle fill starting point x: MouthMovingSmall2 y: 41 width: 5 high: 3

Wait 1 s

Else

Set EyeLeftStartingPos value to 47

Set EyeRightStartingPos value to 73

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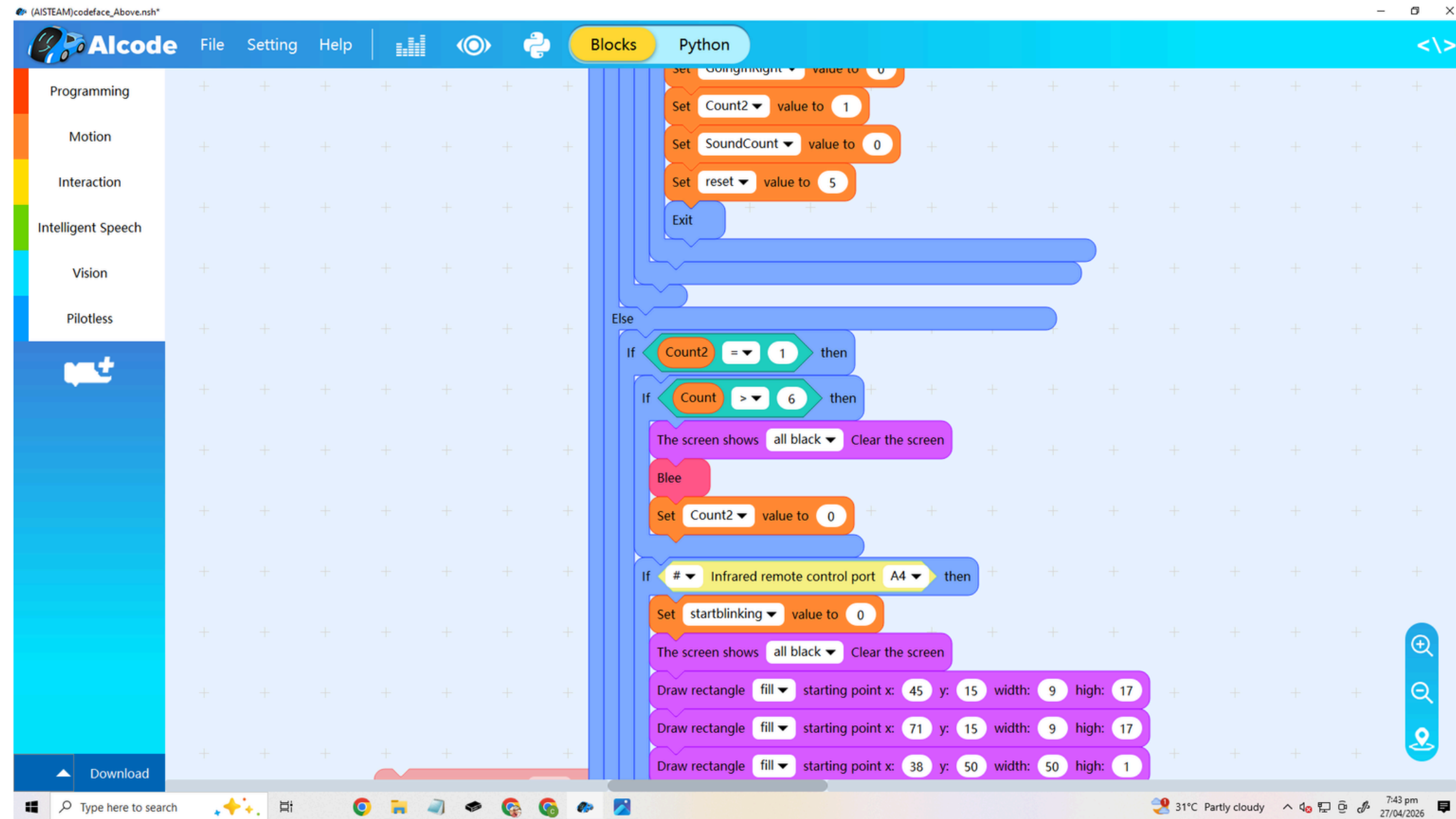
Draw rectangle fill starting point x: MovingEyeLeft y: 10 width: 5 high: 17
Draw rectangle fill starting point x: MovingEyeRight y: 10 width: 5 high: 17
Draw rectangle fill starting point x: MouthmovingHuge y: 50 width: 50 high: 1
Draw rectangle fill starting point x: MouthMovingSmall2 y: 41 width: 5 high: 3
Wait 1 s
Else
Set EyeLeftStartingPos value to 47
Set EyeRightStartingPos value to 73
Set MovingEyeLeft value to 47
Set MovingEyeRight value to 73
Set EyeHigh value to 17
Set Count value to 4
Set MouthmovingHuge value to 38
Set MouthMovingSmall1 value to 32
Set MouthMovingSmall2 value to 87
Set MouthMovingSmall2 value to 107
Set Stages value to 0
Set Stages2 value to 0
Set GoingInLeft value to 0

31°C Partly cloudy 7:43 pm 27/04/2026



AISTEAM 101S

CODES





AISTEAM 101S

CODES

Alcode (AISTEAM)codeface_Above.nsh*

File Setting Help

Blocks Python

Programming

Motion

Interaction

Intelligent Speech

Vision

Pilotless

Turn on the buzzer Port A1 N

Set startblinking value to 0

The screen shows all black Clear the screen

Draw rectangle fill starting point x: 45 y: 15 width: 9 high: 17

Draw rectangle fill starting point x: 71 y: 15 width: 9 high: 17

Draw rectangle fill starting point x: 38 y: 50 width: 50 high: 1

Draw rectangle fill starting point x: 32 y: 41 width: 5 high: 3

Draw rectangle fill starting point x: 87 y: 41 width: 5 high: 3

Draw rectangle fill starting point x: EyeLeftStartingPos y: 10 width: 5 high: 17

Draw rectangle fill starting point x: EyeRightStartingPos y: 10 width: 5 high: 17

Draw rectangle fill starting point x: 38 y: 50 width: 50 high: 1

Draw rectangle fill starting point x: 32 y: 41 width: 5 high: 3

Draw rectangle fill starting point x: 87 y: 41 width: 5 high: 3

Wait 1 s

The screen shows all black Clear the screen

Set EyeHigh value to 4

Draw rectangle fill starting point x: 45 y: 15 width: 9 high: EyeHigh

Draw rectangle fill starting point x: 71 y: 15 width: 9 high: EyeHigh

Draw rectangle fill starting point x: 38 y: 50 width: 50 high: 1

Download

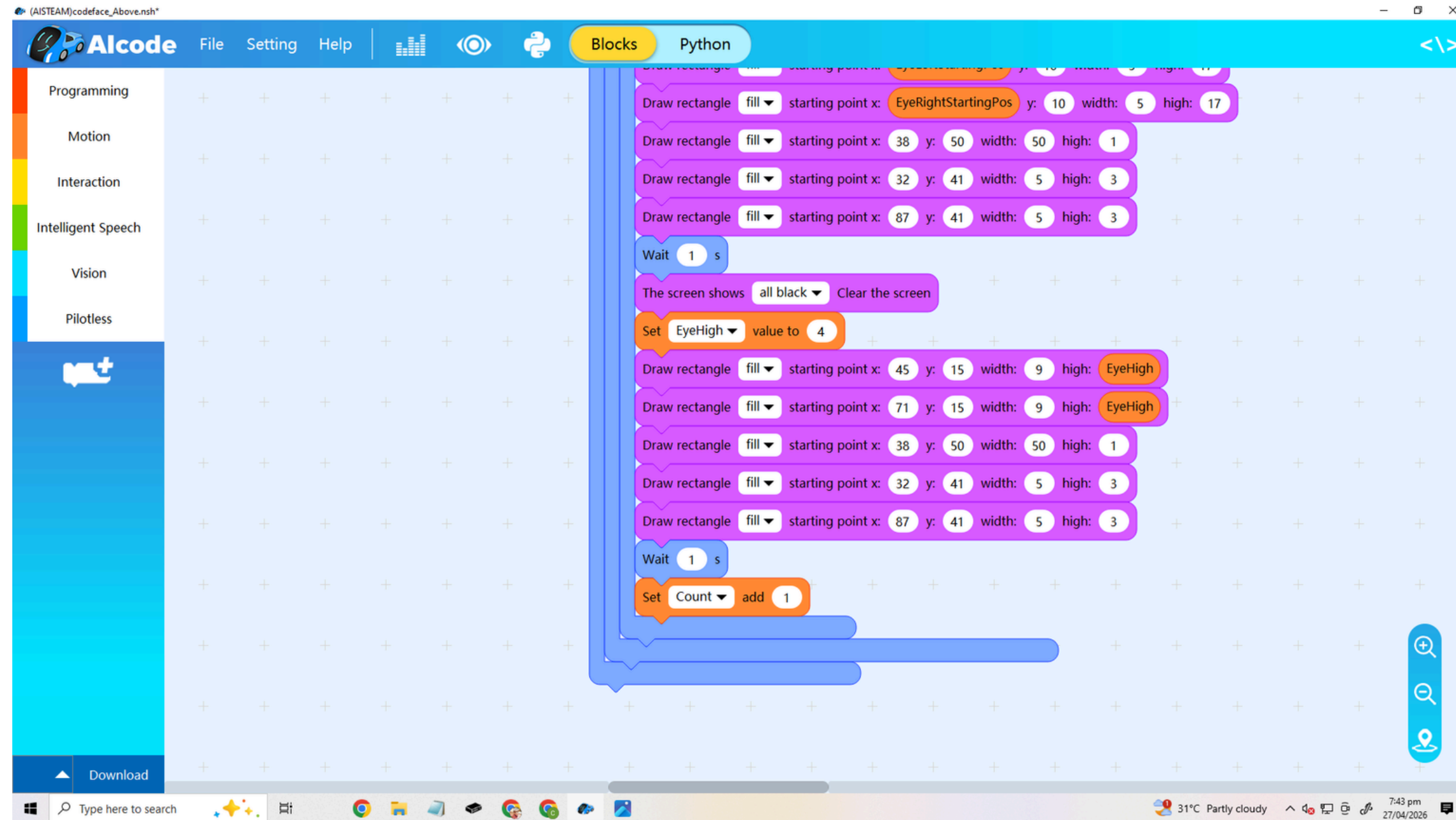
Type here to search

31°C Partly cloudy 7:43 pm 27/04/2026



AISTEAM 101S

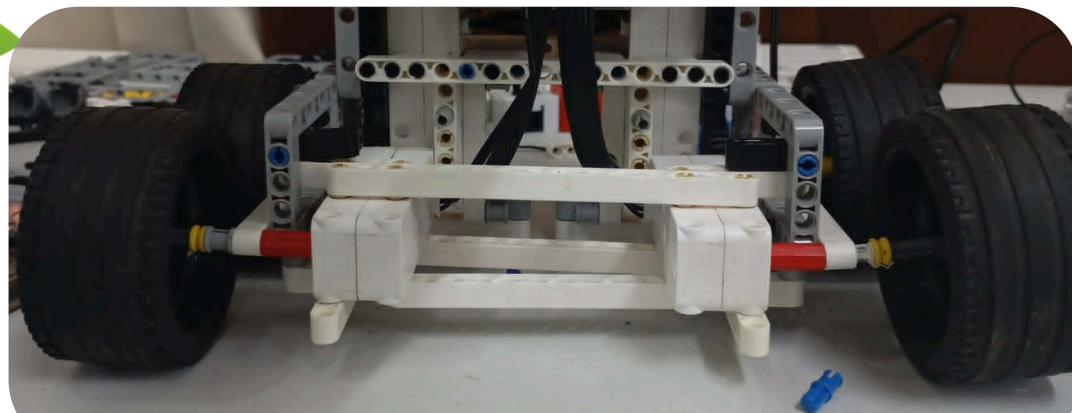
CODES



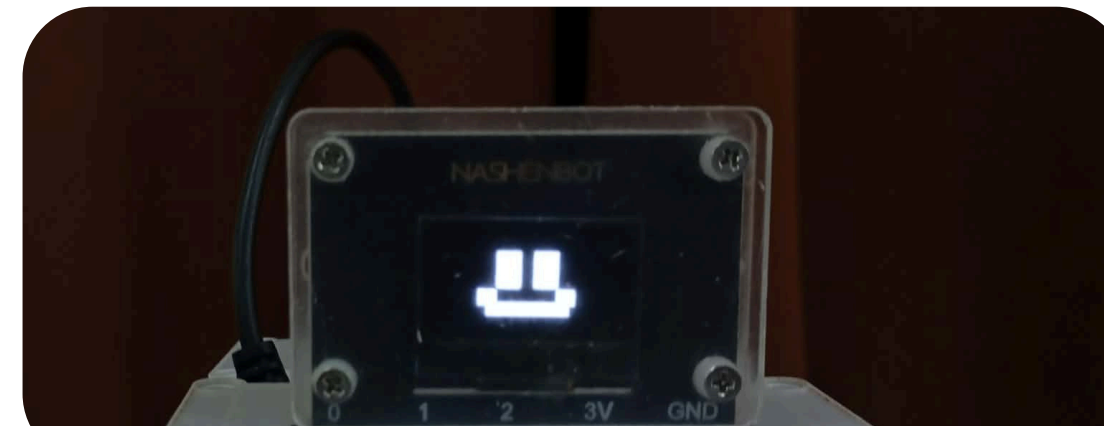


AISTEAM 101S

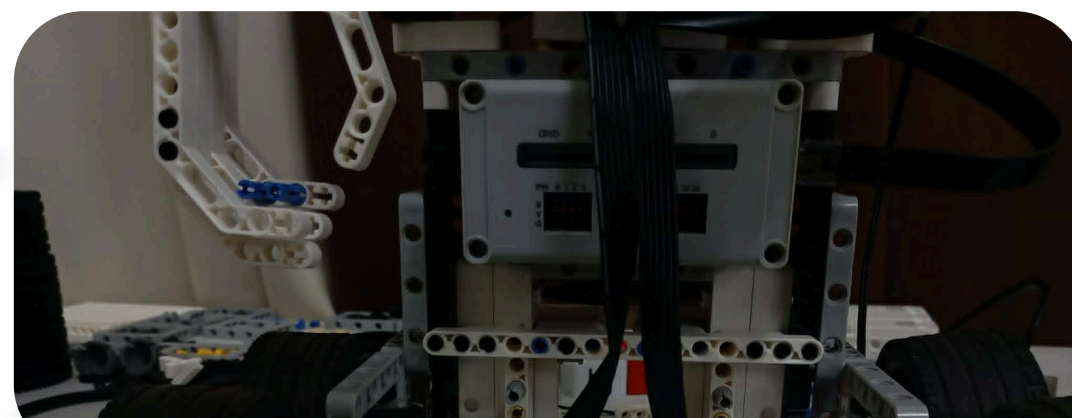
Glordon – The Planter



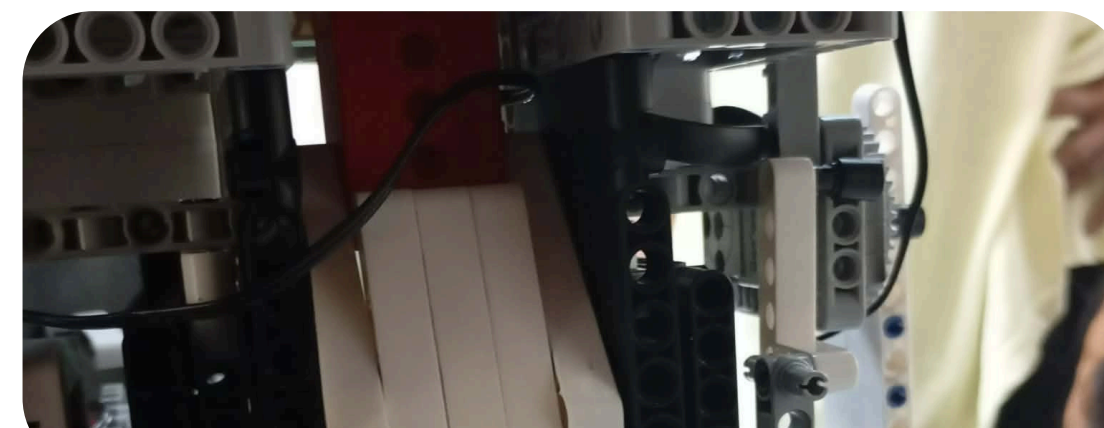
4 Wheel



Glordon's Face



Below Microcontroller



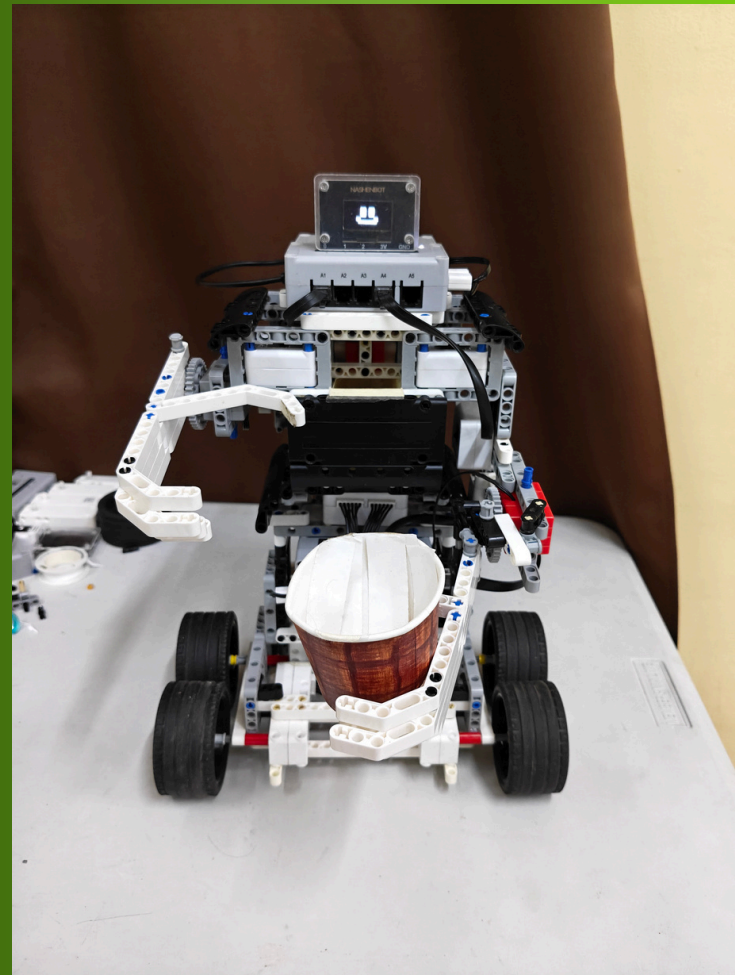
Seed's Storage

Glordon – The Planter

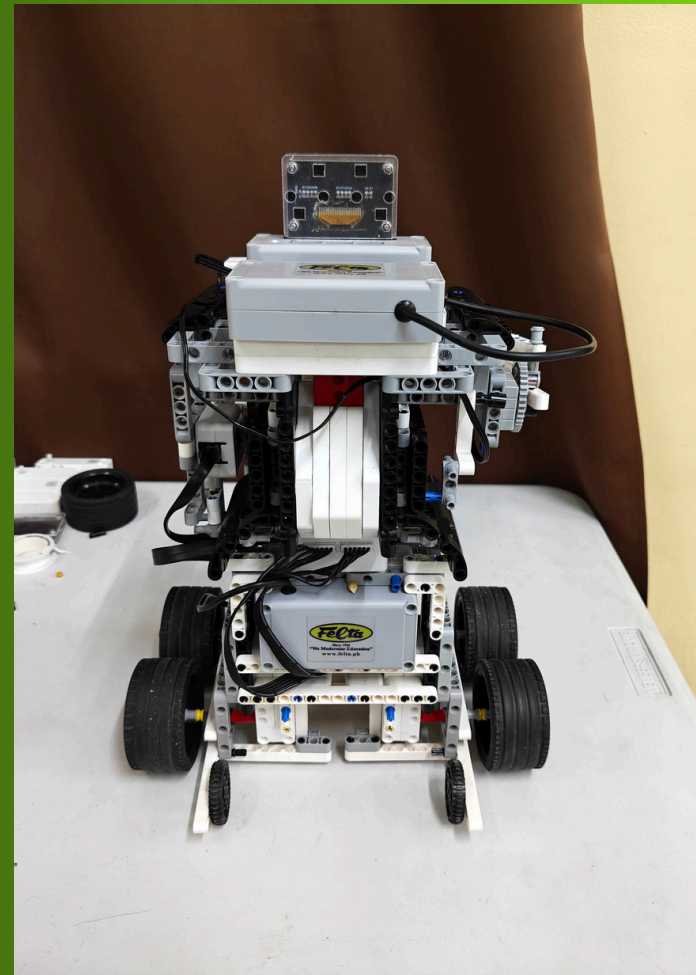


AISTEAM 101S

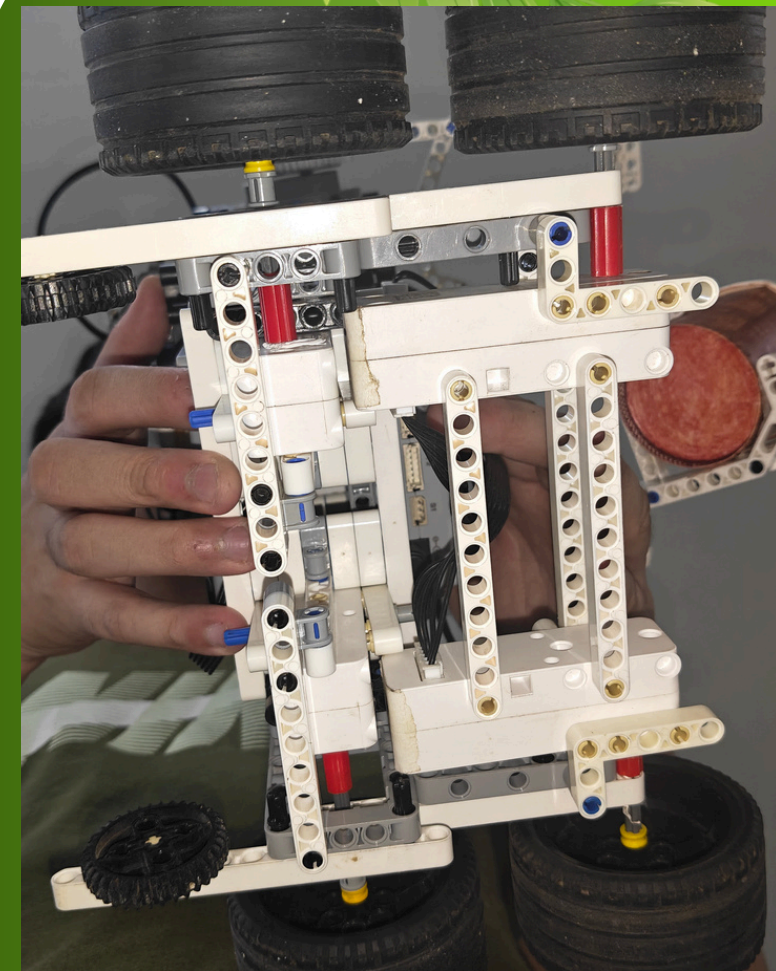
Side by side picture



Front



Back



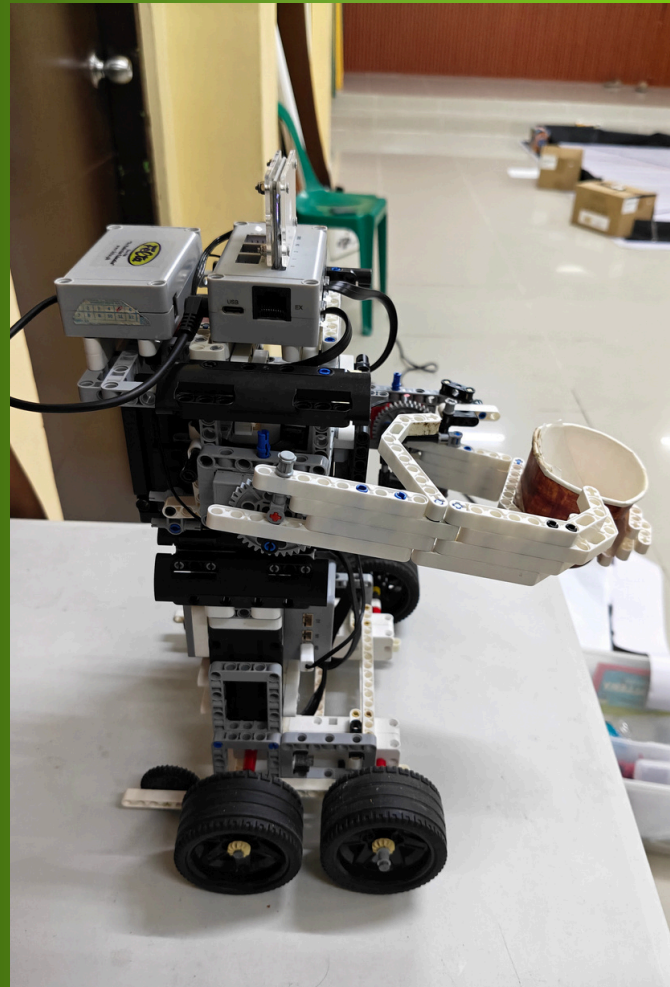
Lower

Glordon – The Planter

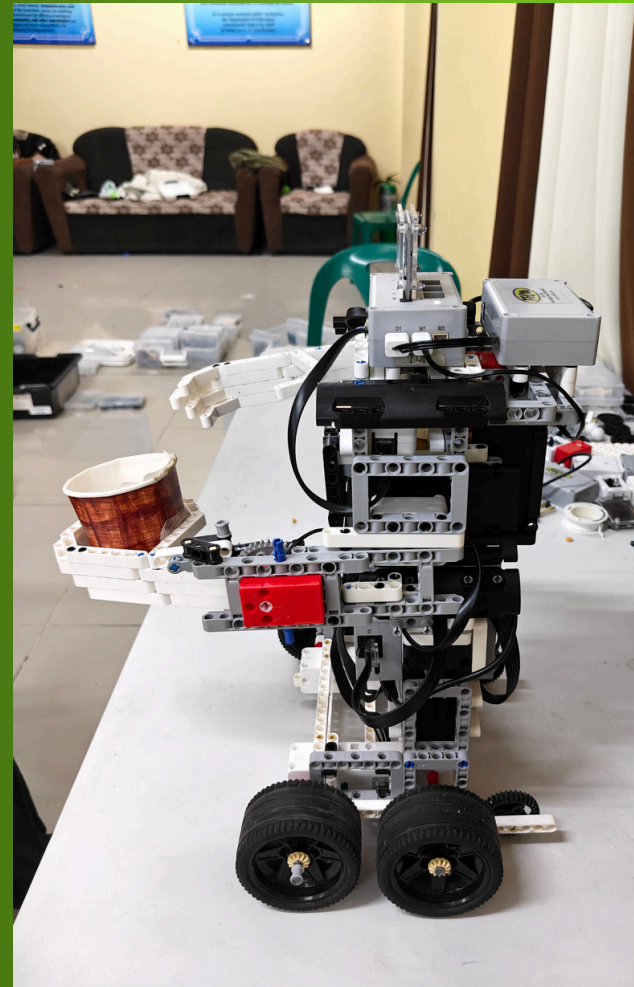


AISTEAM 101S

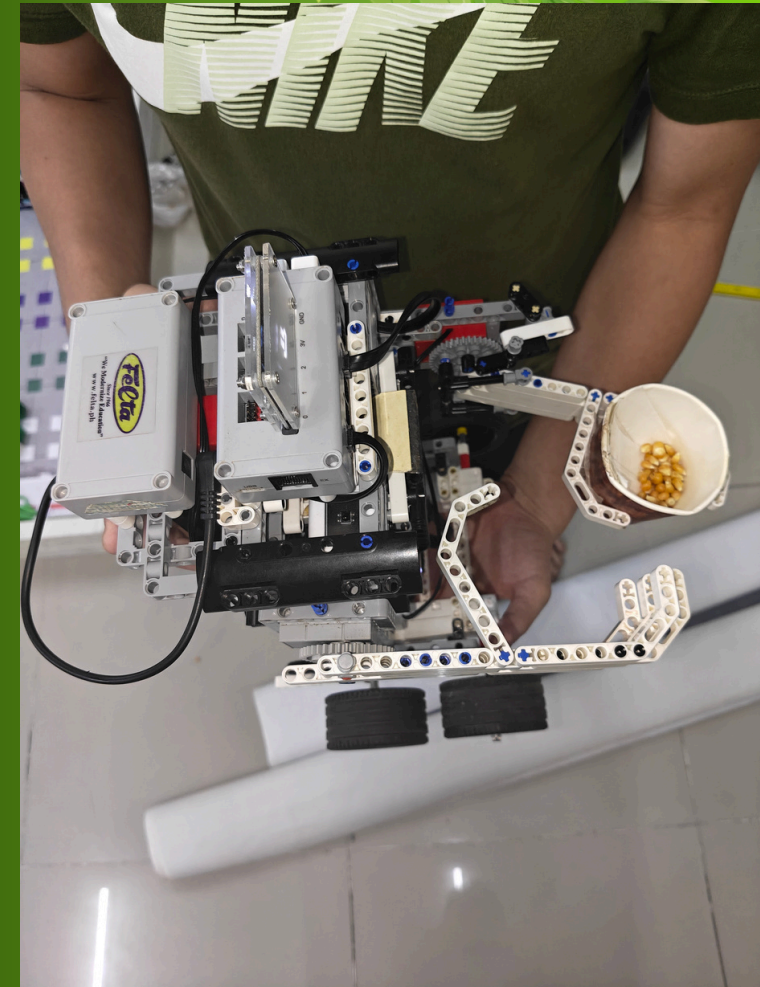
Side by side picture



Left



Right



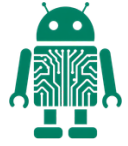
Upper



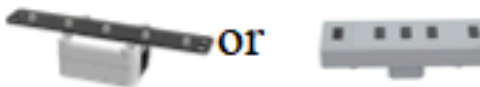


AISTEAM 101S

No.	Electronic Component Name	Image	AISTEAM 101S		Quantity Used in Your Work
			1 Kit	2 Kits	
1	Controller		1	2	2
2	Lithium Battery		1	2	2
3	Motor Expansion Module		1	2	1
4	Encoder Motor		4	8	4
5	Servo Motor		1	2	1
6	Ordinary Motor		1	2	2
7	Infrared Sensor		1	2	0



AISTEAM 101S

No.	Electronic Component Name	Image	AISTEAM 101S		Quantity Used in Your Work
			1 Kit	2 Kits	
8	Single-line Follower Sensor		3	6	0
9	Infrared Remote Control Module		1	2	2
10	Full Color Light		2	4	0
11	Buzzer Module		1	2	1
12	Integrated 5-Grayscales Sensor	 or 	1	2	0
13	Display Screen		1	2	1
Total Quantity of Electronic Components			19	38	16



AISTEAM 101S

No.	Building Block Name	Image	AISTEAM 101S		Quantity Used in Your
			1 Kit	2 Kits	
1	Bush For Cross Axle		4	8	8
2	Bolt and Shaft Connector		4	8	4
3	1x2 Cross Axle Connector		4	8	4
4	2# Cross Axle Connector		4	8	0
5	6# Cross Axle Connector		4	8	2
6	1/2 Bush		8	16	6
7	Half Cross Axle Half Bolt (Sliding)		10	20	2
8	Axle and Bolt Connector		4	8	3
9	Axle and Bolt Connector with hole		4	8	1
10	Beam 3 M. W/4 Snaps		4	8	6
11	Bolt Connector		4	8	5



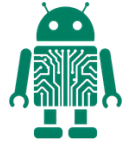
AISTEAM 101S

No.	Building Block Name	Image	AISTEAM 101S		Quantity Used in Your
			1 Kit	2 Kits	
12	Cross Axle Cross Connector		4	8	4
13	Power Joint		1	2	0
14	Steel Ball		1	2	0
15	1x3 Cross Axle With End Stop		6	12	2
16	1x8 Cross Axle With End Stop		2	4	4
17	1+2 Cross Axle		4	8	8
18	Long Double-ended Bolt		10	20	0
19	Standard Bolt Friction Pin		70	140	140
20	Standard Bolt		10	20	20
21	3/4 Bolt		28	56	30
22	Long Friction Pin, Bolts at Both Ends		40	80	38



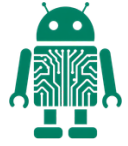
AISTEAM 101S

No.	Building Block Name	Image	AISTEAM 101S		Quantity Used in Your
			1 Kit	2 Kits	
23	Half Cross Axle Half Bolt		10	20	20
24	Cross Axle Long Bolt		10	20	9
25	1x3 Connector Axle and Bolt		4	8	8
26	1x3 Long Cross Axle Bolt		8	16	0
27	1x5x11 Panel		4	8	7
28	11x3 Panel with 10 Holes		4	8	7
29	5x11_#18 Panel		2	4	0
30	5x11_#17 Panel		2	4	0
31	3X5 L Beam		10	20	20
32	2X4 L Beam (Thick)		6	12	7
33	3X3 T Beam		2	4	0



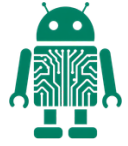
AISTEAM 101S

No.	Building Block Name	Image	AISTEAM 101S		Quantity Used in Your
			1 Kit	2 Kits	
34	3X7 Technic Angular Beam		4	8	3
35	11.5 Double Angular Beam		8	16	12
36	Cross Axle and Bolt Connector		6	12	11
37	1x1 Bolt Connector		4	8	2
38	U Beam		1	2	0
39	1x2 Cross Axle		4	8	2
40	Beam R. Frame 5X11		2	4	4
41	Beam Frame 5X7		8	16	16
42	Gear Wheel 24		2	4	0
43	Gear Wheel 20, Black		2	4	0
44	Gear Wheel 12, Black		2	4	0



AISTEAM 101S

No.	Building Block Name	Image	AISTEAM 101S		Quantity Used in Your
			1 Kit	2 Kits	
45	Gear Wheel 16		2	4	0
46	Gear Wheel 12, Yellow		2	4	4
47	Gear Wheel 20, Yellow		2	4	0
48	Gear Wheel 40		2	4	2
49	Gear Wheel 36		2	4	2
50	Gear Wheel 16		2	4	0
51	1x3 Technic Beam (Thick)		6	12	8
52	1x5 Technic Beam		4	8	6
53	1x7 Technic Beam		4	8	8
54	1x9 Technic Beam (Thick)		8	16	12
55	1x11 Technic Beam		6	12	8



AISTEAM 101S

No.	Building Block Name	Image	AISTEAM 101S		Quantity Used in Your
			1 Kit	2 Kits	
56	1x13 Technic Beam		2	4	4
57	1x15 Technic Beam		2	4	4
58	1x3 Cross Axle		4	8	2
59	1x4 Cross Axle		4	8	3
60	1x5 Cross Axle		4	8	0
61	1x7 Cross Axle		4	8	0
62	1x9 Cross Axle		4	8	0
63	16 Axle		2	4	1
64	Drive Wheel		2	4	4
65	Mecanum Wheel-L		2	4	0
66	Mecanum Wheel-R		2	4	0
Total Quantity of Building Blocks			407	814	483