SunFounder Pan-tilt HAT Kit
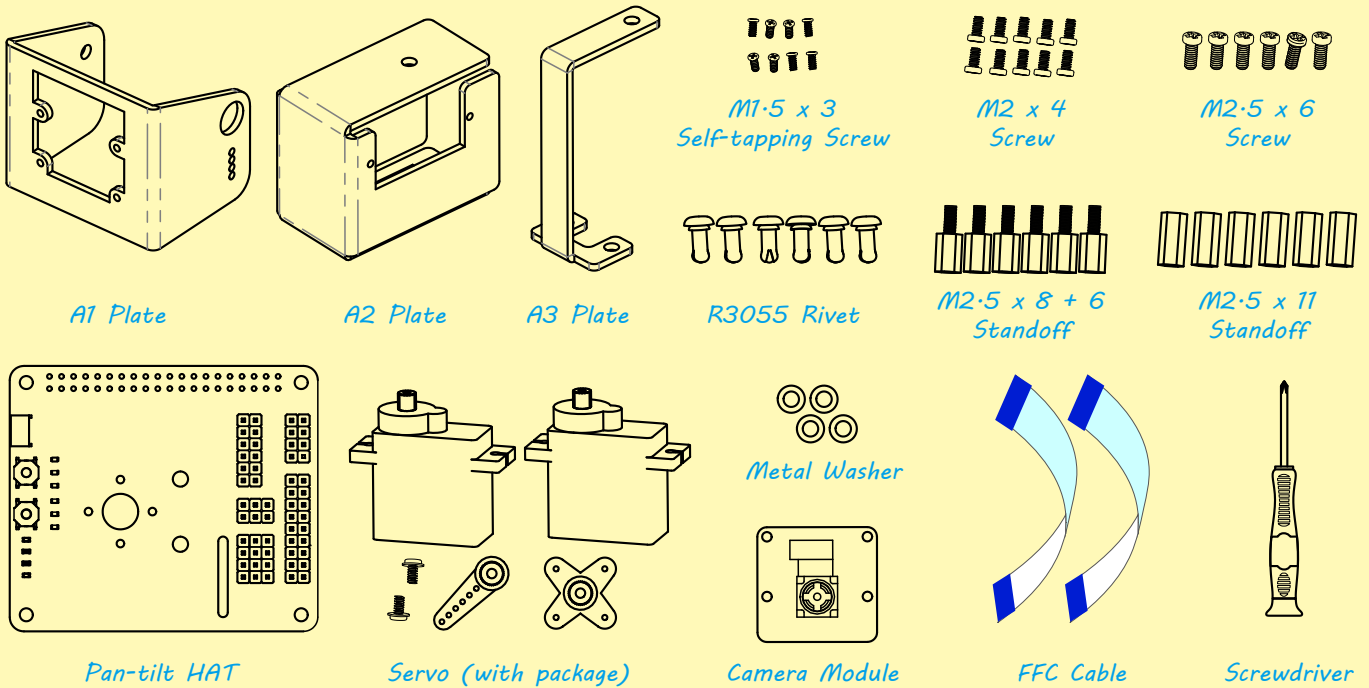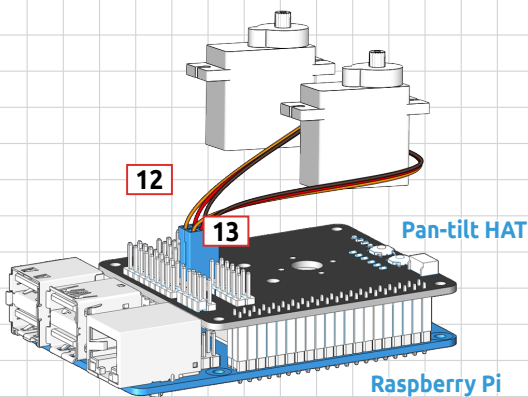
Get tutorial at: pantilt-v3.rtfd.io

A1 Plate

A2 Plate

A3 Plate

M1.5 x 3 Self-tapping Screw

M2 x 4 Screw

M2.5 x 6 Screw

R3055 Rivet

M2.5 x 8 + 6 Standoff

M2.5 x 11 Standoff

Pan-tilt HAT

Servo (with package)

Camera Module

Metal Washer

FFC Cable

Screwdriver

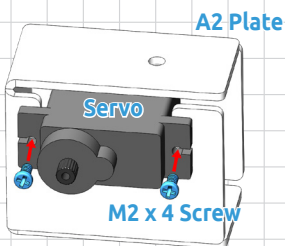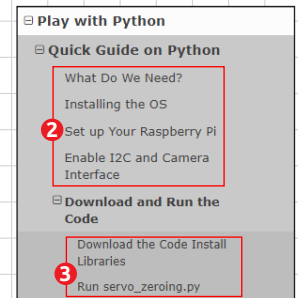## ASSEMBLE

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Pan-tilt HAT

Raspberry Pi

Step 0

1. Establish a temporary connection between the Pan-tilt HAT and the Raspberry Pi.
2. Follow the online tutorial at pantilt-v3.rtfd.io, focusing specifically on the "Quick Guide on Python" chapter.
3. Set up your Raspberry Pi according to the instructions, and align both servos to 0°.
4. Finally, unplug the servo wires.

⊟ **Play with Python**

⊟ **Quick Guide on Python**

What Do We Need?

Installing the OS

2 Set up Your Raspberry Pi

Enable I2C and Camera Interface

⊟ **Download and Run the Code**

Download the Code Install Libraries

3 Run servo_zeroing.py

A2 Plate

Servo

M2 x 4 Screw

Step 1
Mount the servo onto the A2 plate, ensuring it's correctly oriented for accurate placement.

Servo

M2 x 4 Screw
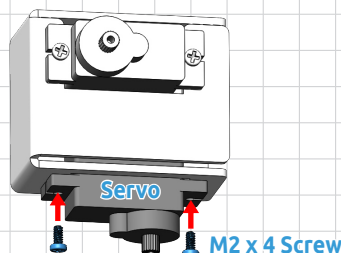
Step 2
Fasten another servo onto the A2 plate, making sure the orientation is correct.

M1.5 x 3 Self-tapping Screw

Servo Arm

Pan-tilt HAT
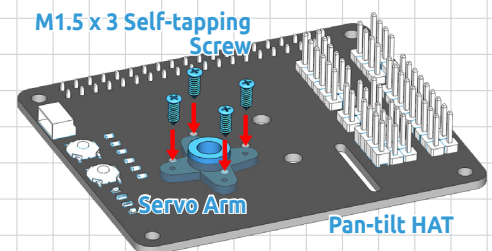
Step 3
Affix a cross-shaped servo arm to the Robot HAT using screws.

R3055 Rivet

Metal Washer

A3 Plate

The smallest screw include in the servo package.

Servo Screw

R3055 Rivet

Camera Module

③ Cover ① Pull out

② Insert

FFC Cable

Note the direction of the blue plastic side.
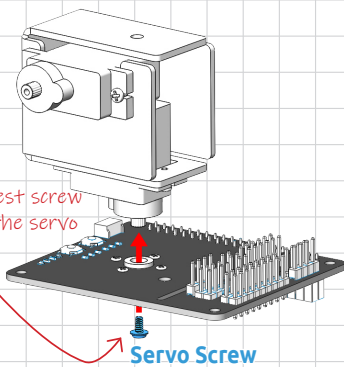
Step 4
Gently secure the gimbal body to the HAT, taking care not to turn the servo shaft.
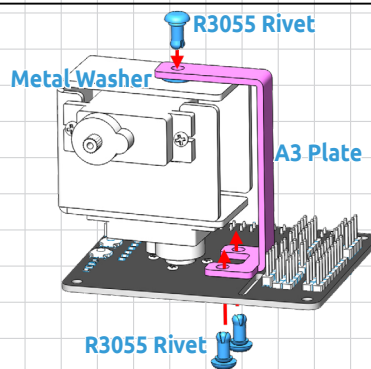
Step 5
Install the A3 plate to promote the gimbal body's smooth operation.

Step 6
Connect the FFC cable to the camera module.

A1 Plate

Servo Arm

The smallest screw include in the servo package.

M1.5 x 3 Self-tapping Screw

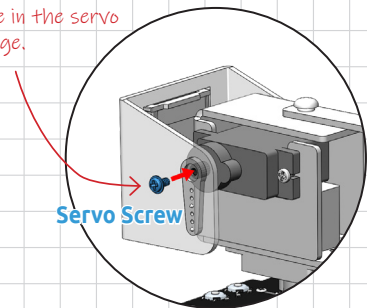**Servo Screw**

M2 x 4 Screw
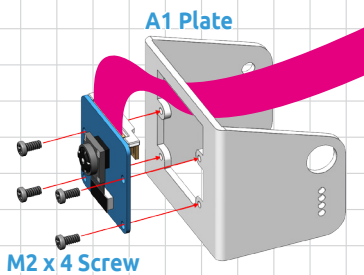
Step 7
Thread the camera's FFC cable through the A1 plate's hole, then screw the camera onto the A1 plate.
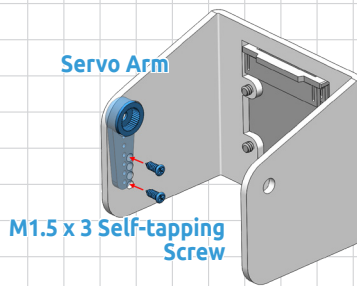
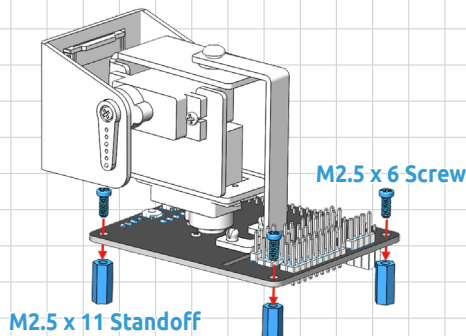**Step 8**
Mount a servo arm to the A1 plate.

Step 9
Attach the A1 plate to the servo on the gimbal body, being mindful not to rotate the servo shaft.

R3055 Rivet

Metal Washer

M2.5 x 6 Screw

M2.5 x 11 Standoff

FFC through the cable hole.

Raspberry Pi
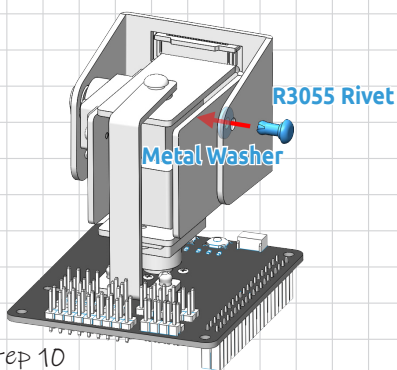
Step 10
Stabilize the A1 plate by fastening a rivet to its opposite side.

Step 11
Mount four sets of standoffs under the HAT to provide substantial support.
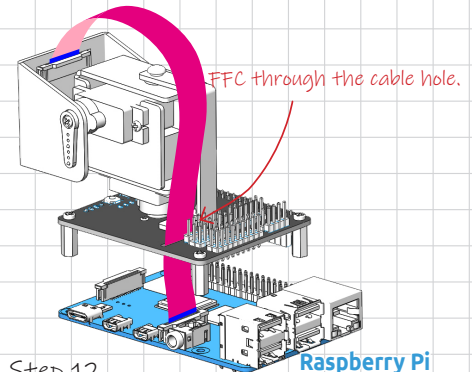
Step 12
Guide the FFC cable from the camera through the wire hole on the HAT, and connect it to the Raspberry Pi.

M2.5 x 8 + 6 Standoff

Tilt Servo

Pan Servo

Pan Servo - Pin 13
Tilt Servo - Pin12

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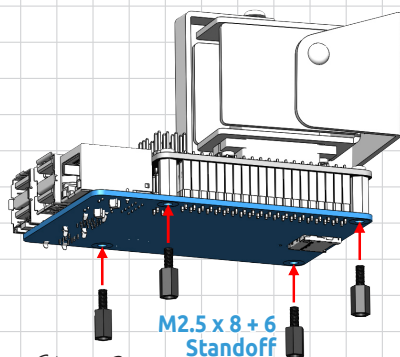
Step 13
Secure the Raspberry Pi with four standoffs.
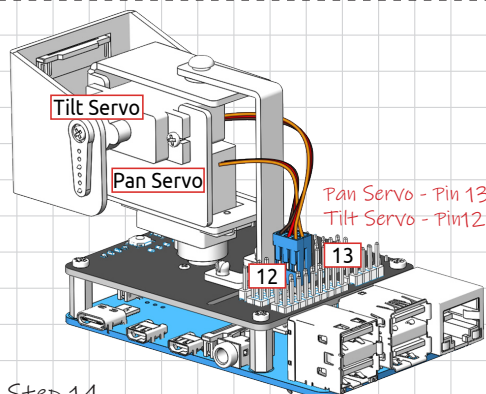
Step 14
Plug the servo wire back into the HAT. Well done! The assembly is now complete.