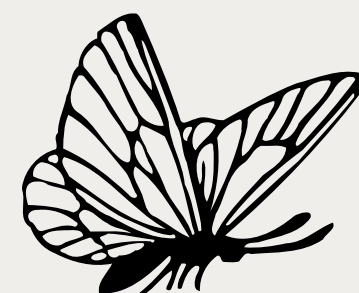




ROBO PROJ 2.2- JETSON NANO

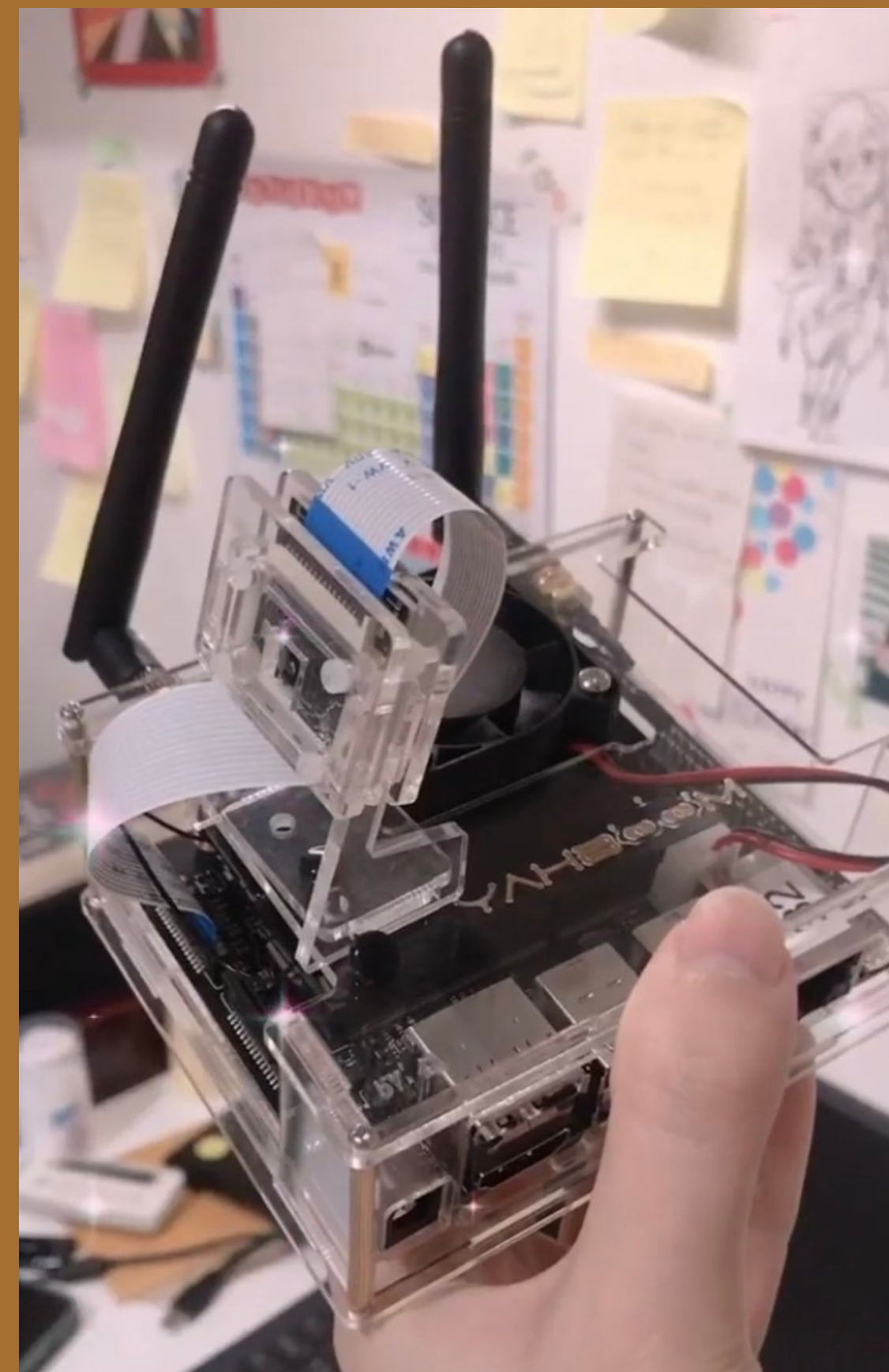
DADDY CHILL



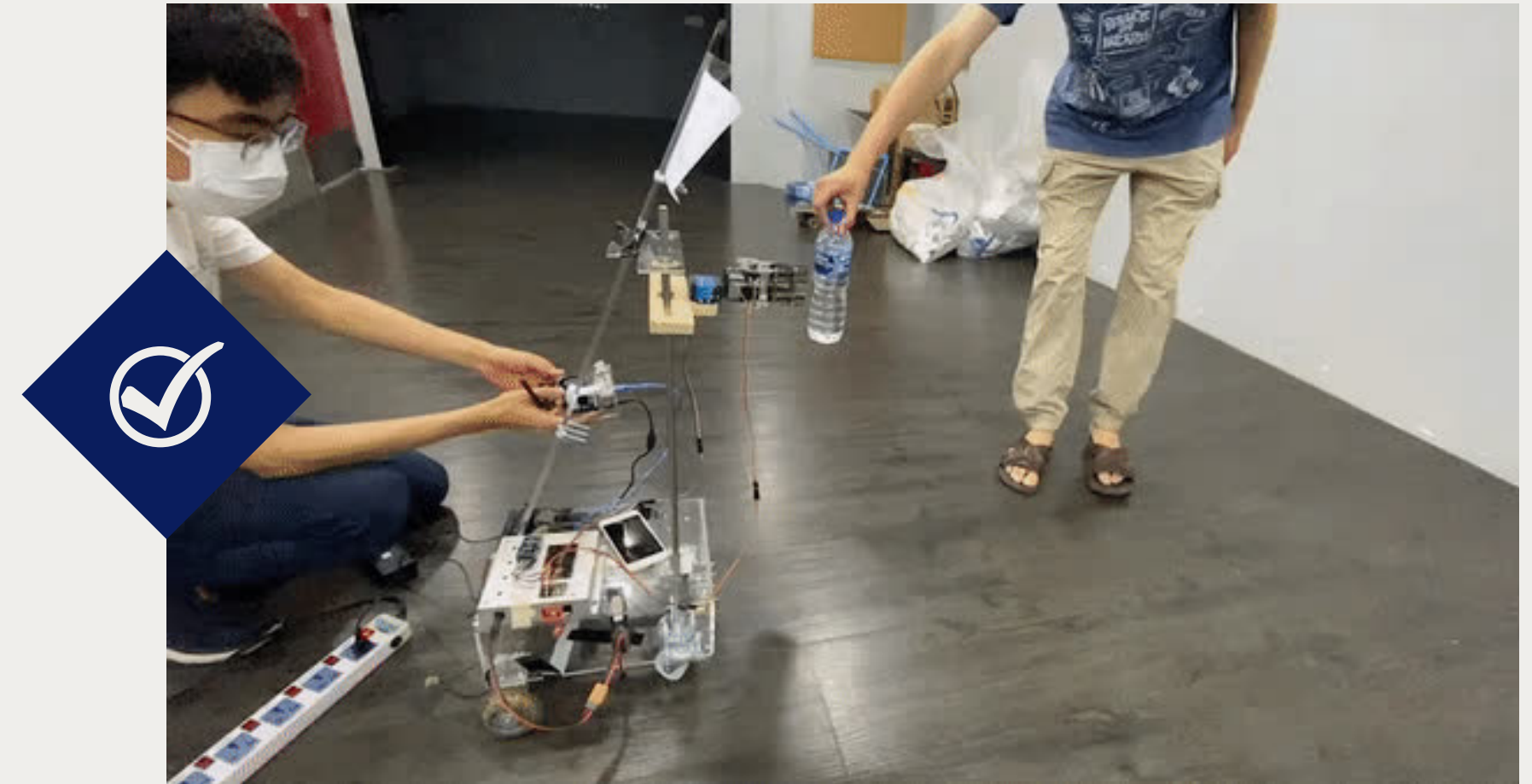
Members:



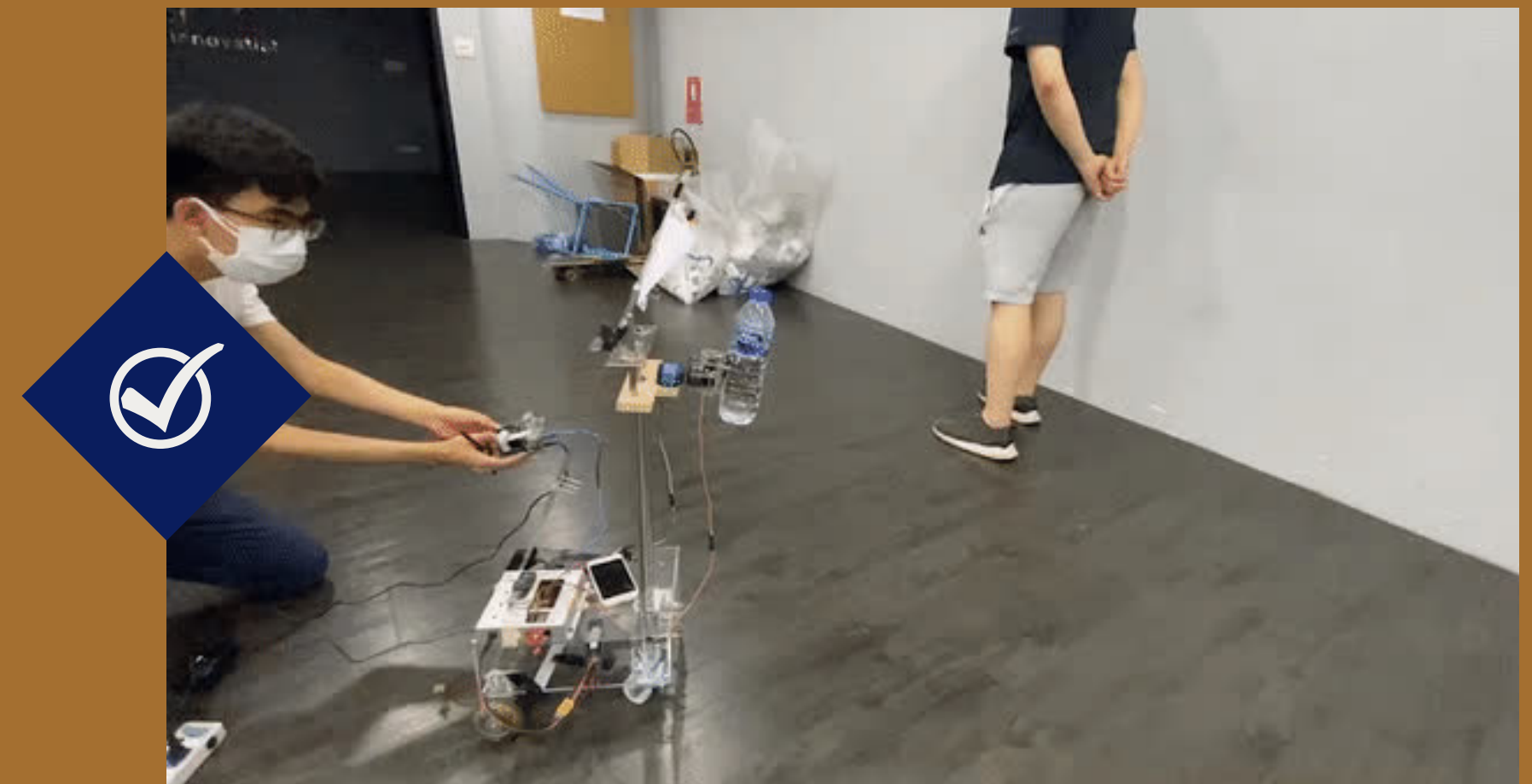
PARANUT-APHIPHU-PATTADON-NATHAMON



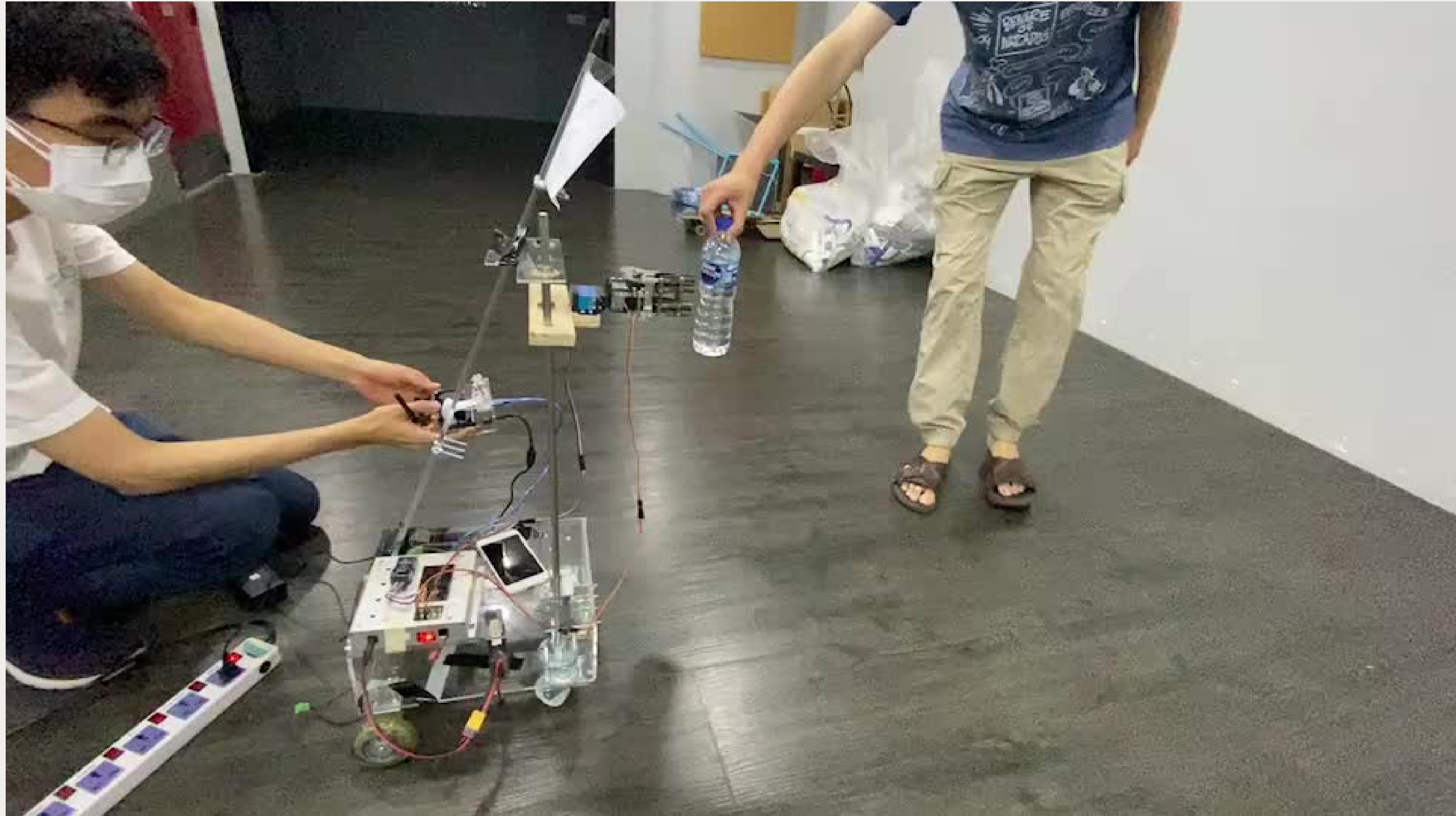
AUTO GRIP THE BOTTLE



AUTO TURN TOWARD THE PERSON



PROTOTYPE DEMO



PYTHON CODE



```
while display.IsStreaming():
    img = camera.Capture()
    detections = net.Detect(img)
    print('ok')
    for detection in detections:
        print(detection)
        if detection.ClassID == 44 and num == 0: # 1 is a person and 44 is a bottle
            print(detection)
            cmd = '{"servo1": 120,"servo2": 90}'
            ser.write(cmd)
            time.sleep(5)
            cmd = '{"servo1": 180,"servo2": 90}'
            ser.write(cmd)
            num += 1
            break
    if num == 1:
        break
    display.Render(img)
    display.SetStatus("Object Detection | Network {:.0f} FPS".format(net.GetNetworkFPS()))

while display.IsStreaming():
    img = camera.Capture()
    detections = net.Detect(img)
    for detection in detections:
        if detection.ClassID == 1:
            if detection.Center[0] > 900:
                cmd = '{"motor1": 500}'
            elif detection.Center[0] < 380:
                cmd = '{"motor1": -500}'
            ser.write(cmd)
            time.sleep(1)
            cmd = '{"motor1": 0}'
            ser.write(cmd)

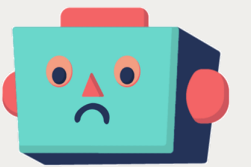
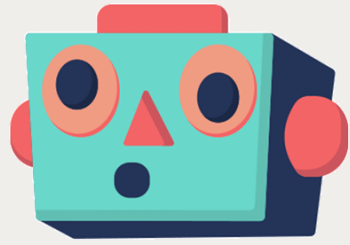
    display.Render(img)
    display.SetStatus("Object Detection | Network {:.0f} FPS".format(net.GetNetworkFPS()))
```

ARDUINO CODE



```
void loop() {
  // Check if there is data in serial buffer
  if (Serial.available()){
    // Deserialize the JSON document
    DeserializationError error = deserializeJson(doc, Serial);

    // Test if parsing succeeds.
    if (!error) {
      if(num < 3){
        int angle1 = doc["servo1"];
        int angle2 = doc["servo2"];
        servo1.write(angle1); //only 180(หมุน)-120(กางสุด)
        servo2.write(angle2);
        num = num+1;
      }
      loopTime = micros()-previousLoopTime;
      if(loopTime >= 10000)
      {
        // Set new loop time
        if(num == 3){
          previousLoopTime = micros();
          currentValue1 = analogRead(CS1)*0.035;
          int value1 = doc["motor1"];
          if(currentValue1 < currentLimit) out1 = OutputToMotor1(value1);
          else out1 = OutputToMotor1(0);
          analogWrite(PWM1,out1);
        }
      }
    }
  }
}
```



THANK YOU JAA

More Details: https://github.com/gear-patt/Automatic_Robot

