

Técnico em Desenvolvimento de Sistemas

Unidade Curricular Redes e IoT

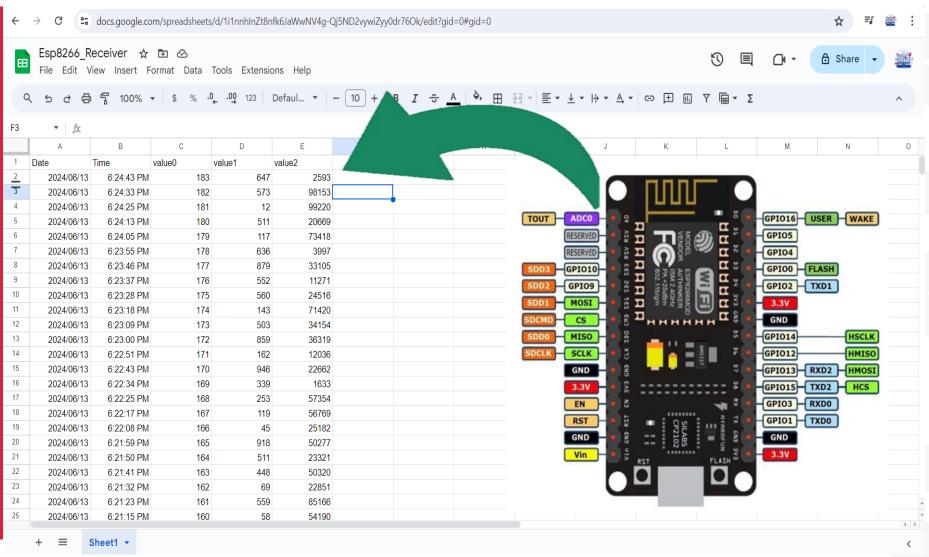
Aula 12:

IoT - ESP 8266

"Seja uma pessoa melhor, NÃO PERFEITA, apenas melhor que ontem."

Desafio 2 – Publicação Google Sheets

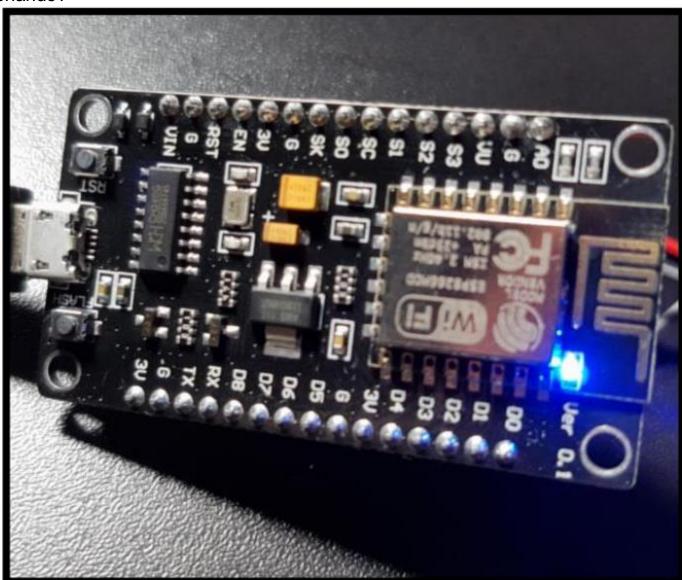




Realizar o teste do pisca led ESP8266

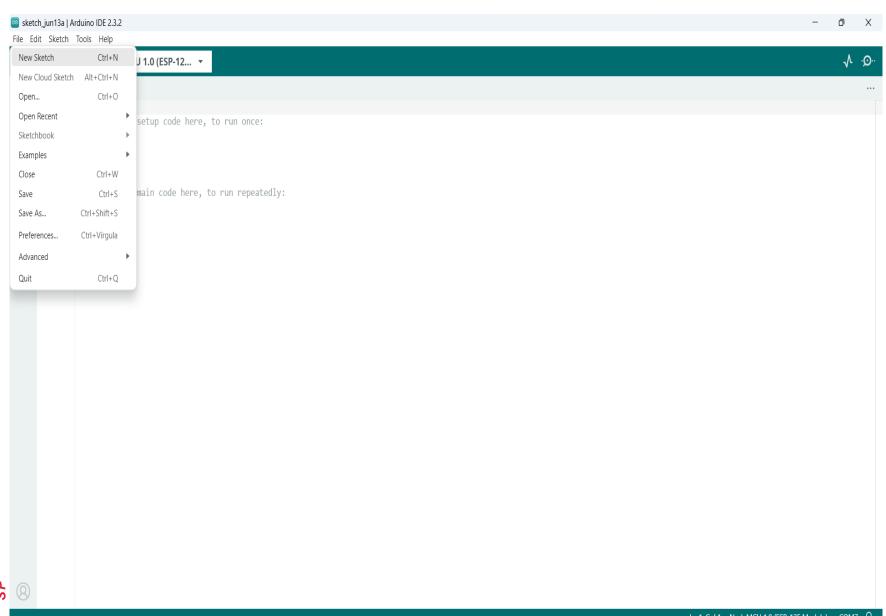


Está funcionando?



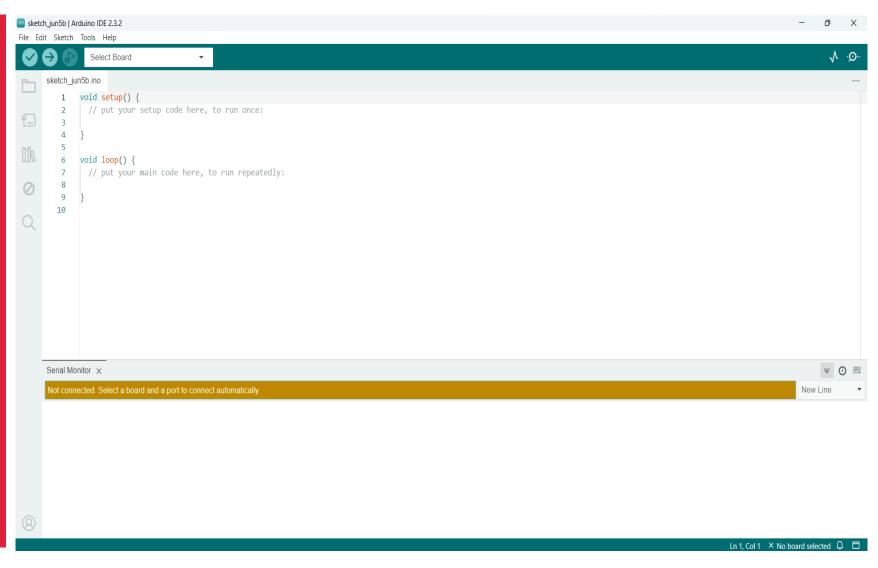
Criar - New Sketch





Inserir código







```
#include <Arduino.h>
       #include <ESP8266WiFi.h>
  9
       #include "HTTPSRedirect.h"
 10
 11
       // Enter network credentials:
 12
       const char* ssid
                         = "redesiot";
 13
       const char* password = "a1234567";
 14
 15
 16
       // Enter Google Script Deployment ID:
       const char *GScriptId = "AKfycbztL26Ftt6qCPr1JusAzOlYg8SoWES1LfCaUjTyfAVNyTHficoep2RvUE-RepAV8UF6";
 17
 18
       // Enter command (insert row or append row) and your Google Sheets sheet name (default is Sheet1):
 19
       String payload base = "{\"command\": \"insert row\", \"sheet name\": \"Sheet1\", \"values\": ";
 20
       String payload = "";
 21
 22
       // Google Sheets setup (do not edit)
  23
       const char* host = "script.google.com";
 24
       const int httpsPort = 443;
  25
       const char* fingerprint = "";
  26
       String url = String("/macros/s/") + GScriptId + "/exec";
  27
       HTTPSRedirect* client = nullptr;
  28
  29
       // Declare variables that will be published to Google Sheets
  30
       int value0 = 0:
 31
       int value1 = 0;
  32
       int value2 = 0;
 33
 34
       void setup() {
 35
 36
         Serial.begin(9600);
 37
         delay(10);
v. 38
         Serial.println('\n');
 39
```



```
googlesheet.ino
               HTTPSRedirect.cpp
  40
          // Connect to WiFi
  41
          WiFi.begin(ssid, password);
  42
          Serial.print("Connecting to ");
  43
          Serial.print(ssid); Serial.println(" ...");
  44
  45
          while (WiFi.status() != WL CONNECTED) {
  46
            delay(1000);
  47
            Serial.print(".");
  48
  49
          Serial.println('\n');
  50
          Serial.println("Connection established!");
  51
          Serial.print("IP address:\t");
  52
          Serial.println(WiFi.localIP());
  53
  54
          // Use HTTPSRedirect class to create a new TLS connection
  55
          client = new HTTPSRedirect(httpsPort);
  56
          client->setInsecure();
  57
          client->setPrintResponseBody(true);
  58
          client->setContentTypeHeader("application/json");
  59
  60
          Serial.print("Connecting to ");
  61
          Serial.println(host);
  62
  63
          // Try to connect for a maximum of 5 times
  64
          bool flag = false;
  65
          for (int i=0; i<5; i++){
  66
            int retval = client->connect(host, httpsPort);
  67
  68
            if (retval == 1){
               flag = true;
  69
               Serial.println("Connected");
  70
               break:
  71
```



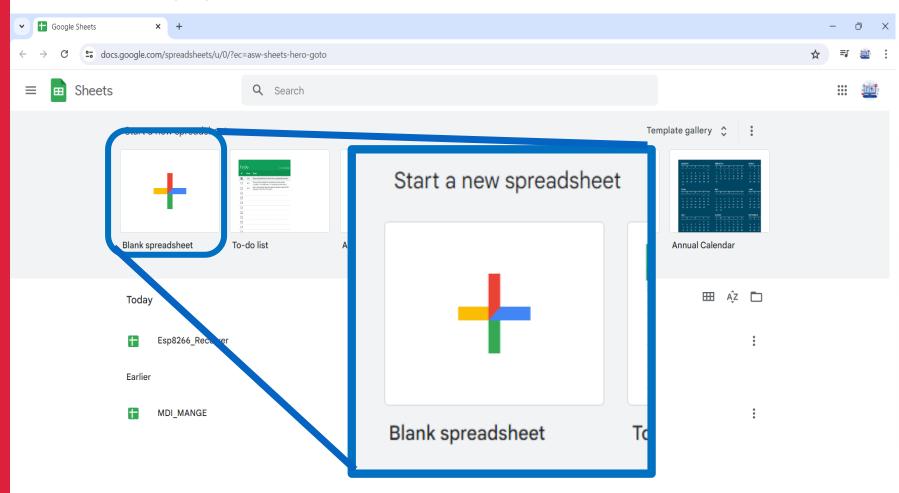
```
googlesheet.ino
                 HTTPSRedirect.cpp
      72
      73
                else
                  Serial.println("Connection failed. Retrying...");
      74
      75
             if (!flag){
      76
                Serial.print("Could not connect to server: ");
      77
                Serial.println(host);
      78
      79
                return;
      80
             delete client; // delete HTTPSRedirect object
      81
             client = nullptr; // delete HTTPSRedirect object
      82
      83
      84
      85
           void loop() {
      86
      87
             // create some fake data to publish
      88
             value0 ++;
      89
             value1 = random(0,1000);
      90
             value2 = random(0,100000);
      91
      92
      93
              static bool flag = false;
      94
             if (!flag){
      95
                client = new HTTPSRedirect(httpsPort);
      96
                client->setInsecure();
      97
               flag = true;
      98
                client->setPrintResponseBody(true);
      99
                client->setContentTypeHeader("application/json");
     100
     101
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              if (client != nullptr){
     102
                if (!client->connected()){
     103
                  client->connect(host, httpsPort);
     104
```



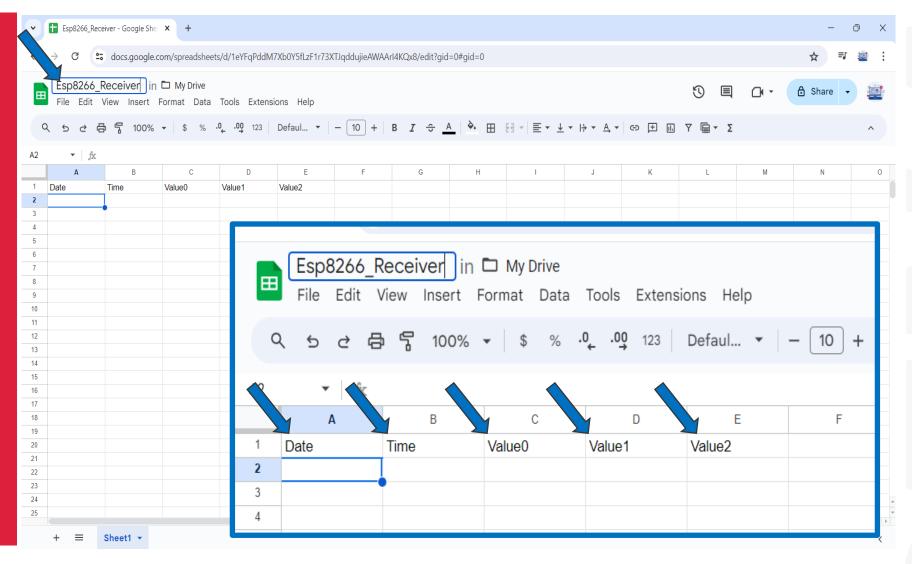
```
client->connect(host, httpsPort);
104
105
106
107
        else{
          Serial.println("Error creating client object!");
108
109
110
111
        // Create json object string to send to Google Sheets
        payload = payload base + "\"" + value0 + "," + value1 + "," + value2 + "\"}";
112
113
        // Publish data to Google Sheets
114
        Serial.println("Publishing data...");
115
        Serial.println(payload);
116
        if(client->POST(url, host, payload)){
117
         // do stuff here if publish was successful
118
119
        else{
120
          // do stuff here if publish was not successful
121
          Serial.println("Error while connecting");
122
123
124
125
        // a delay of several seconds is required before publishing again
        delay(5000);
126
127
```



Link - https://docs.google.com/spreadsheets/create

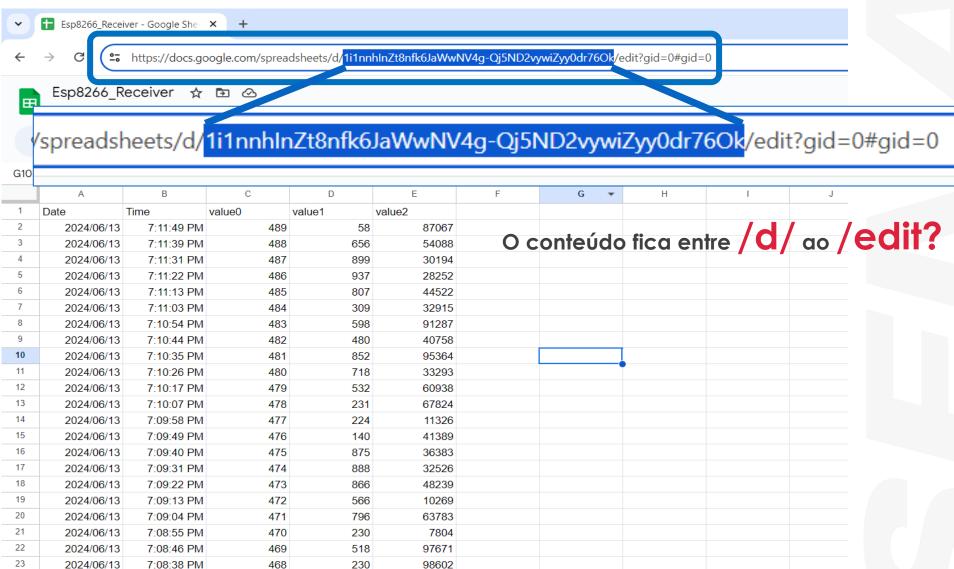








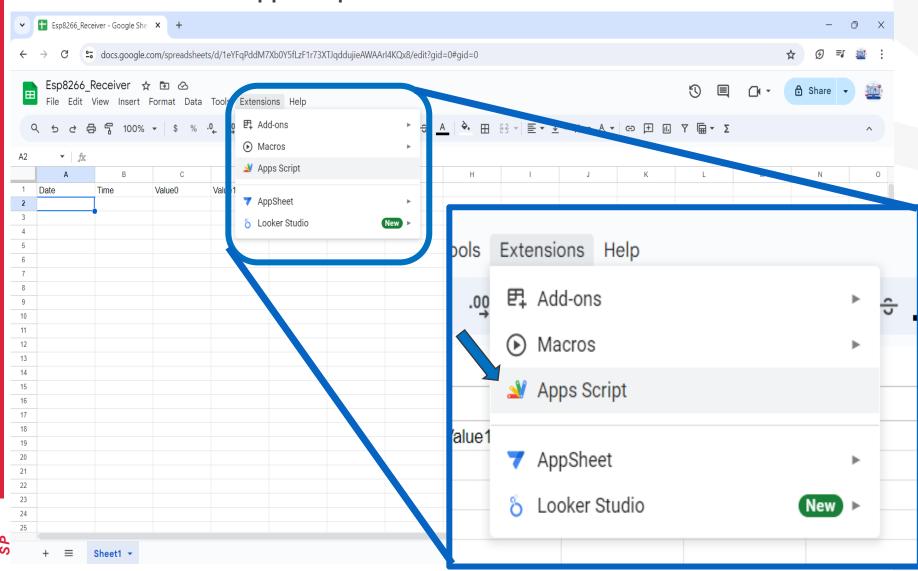
Copie o spreadsheet URL – Salve em um bloco de notas



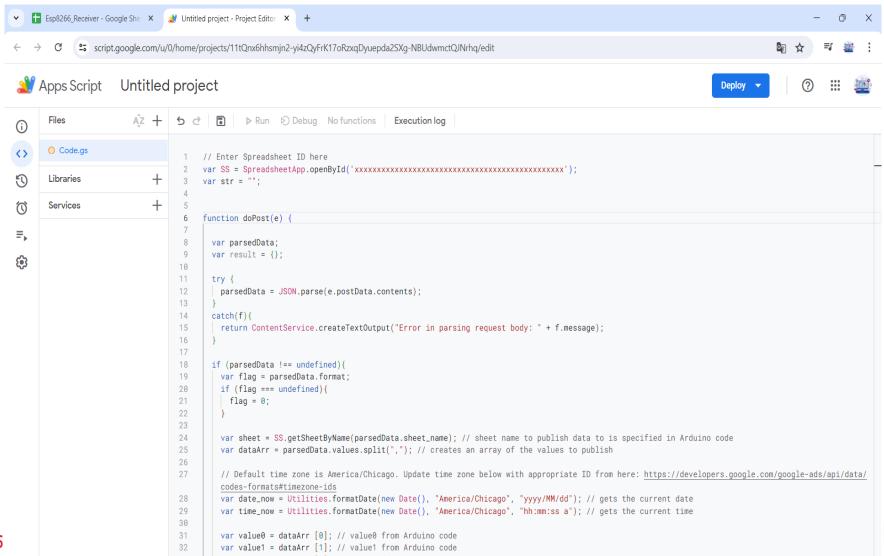


Menu → Extensions → Apps Script

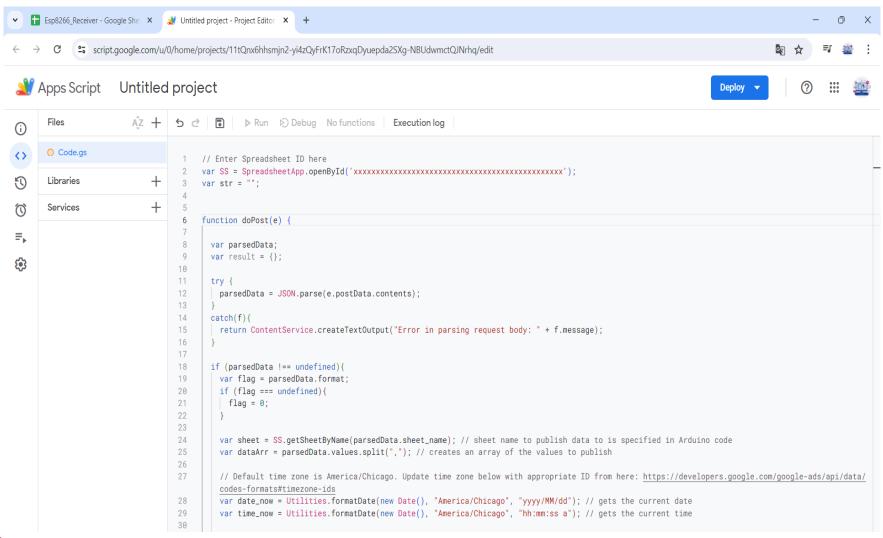
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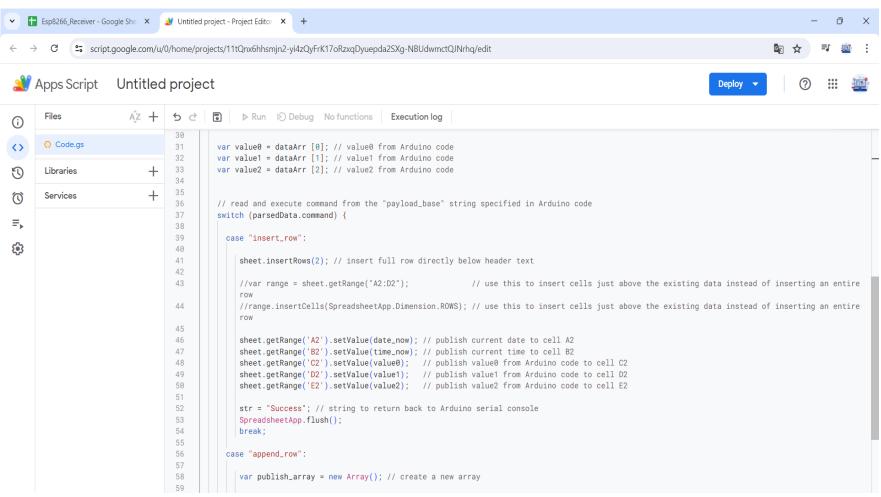




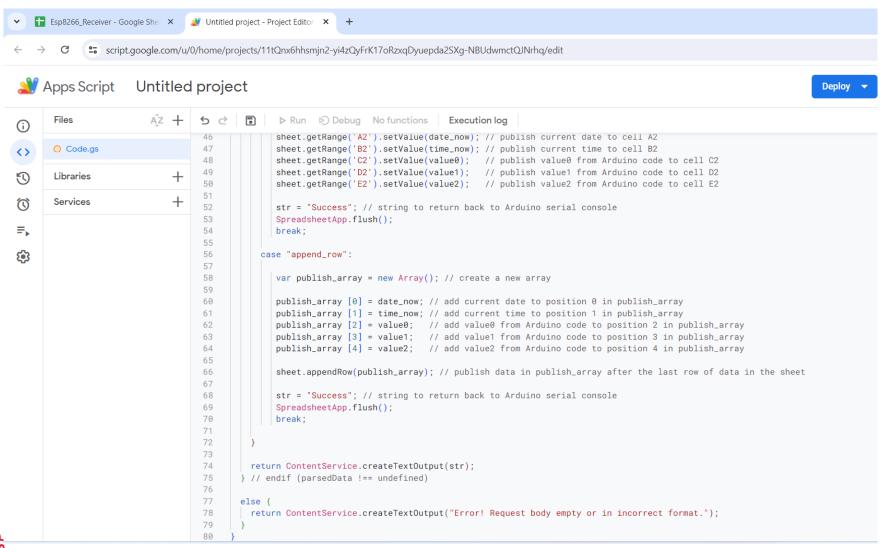




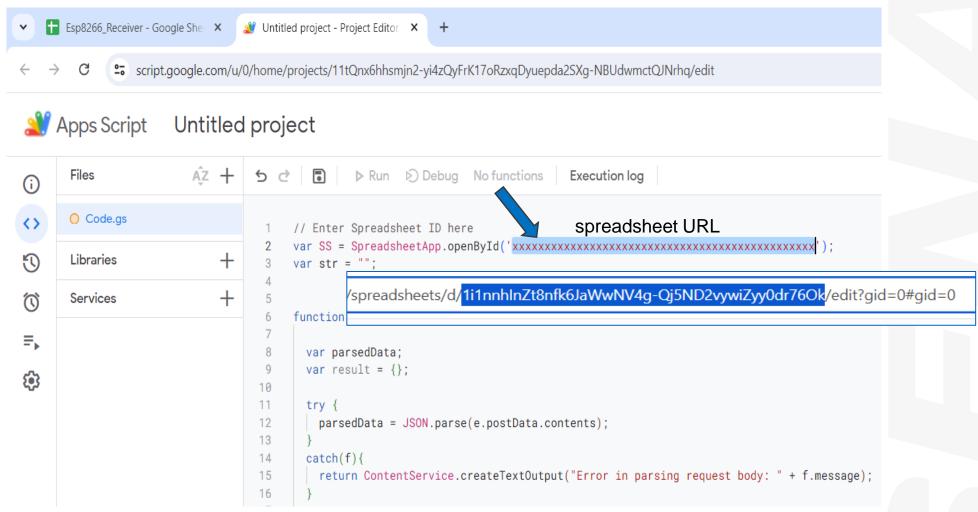




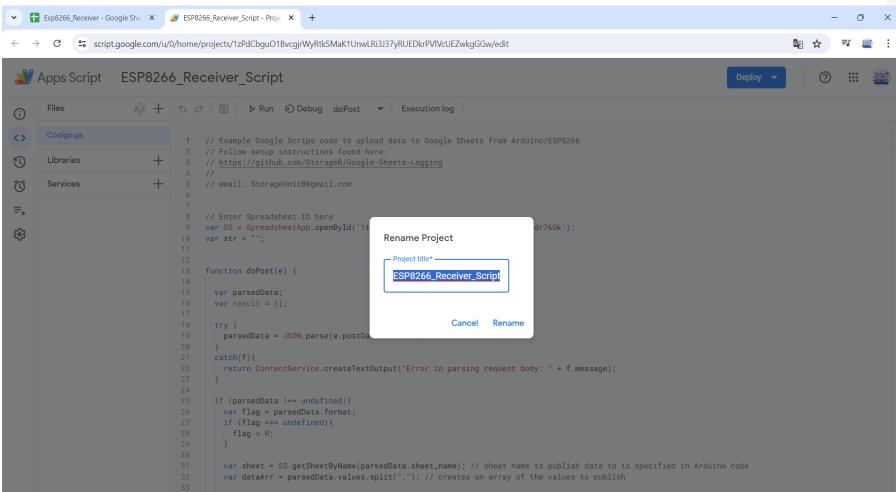






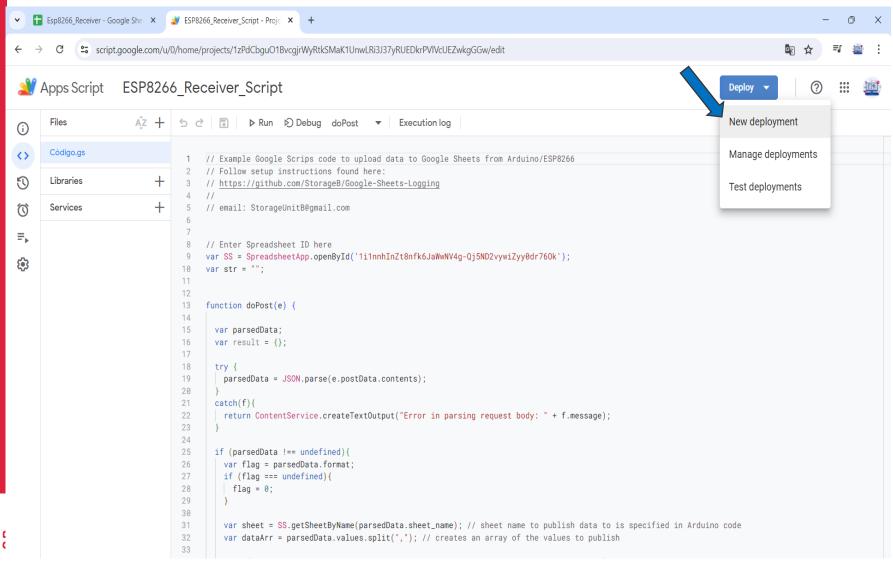






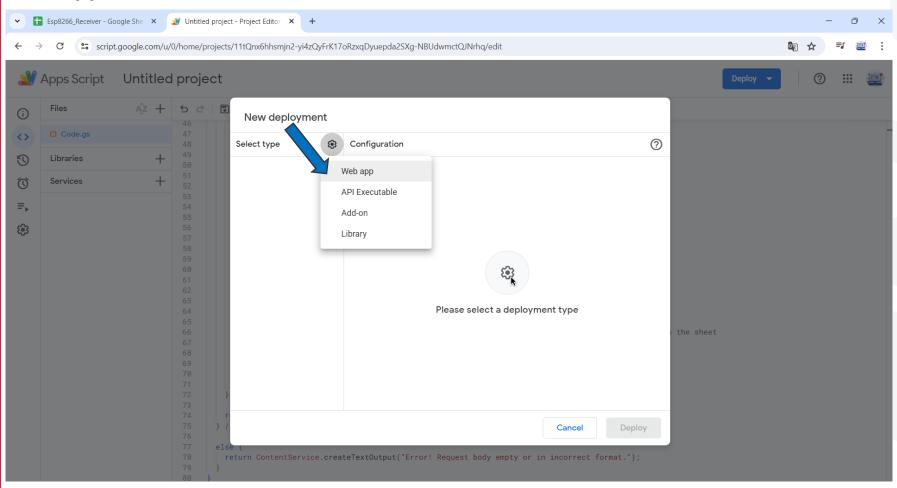


New Deploy



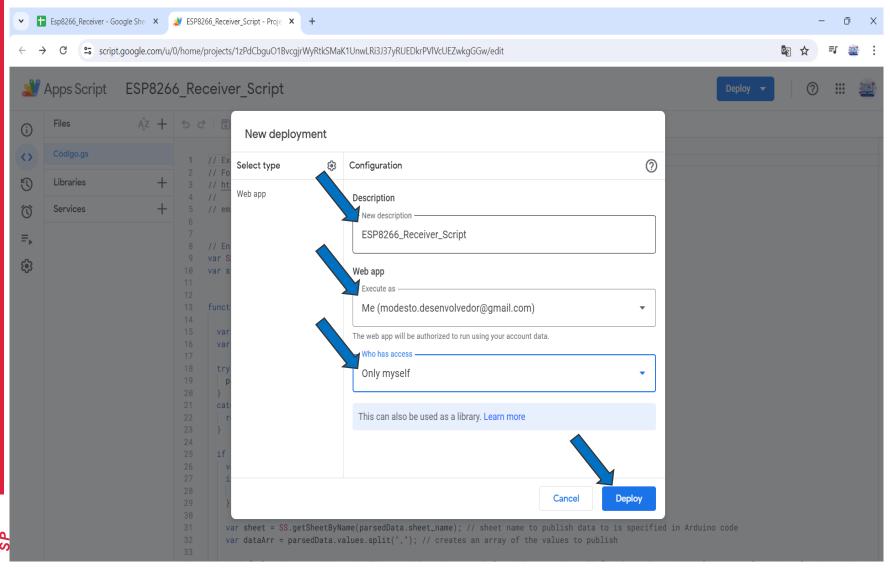


Web app



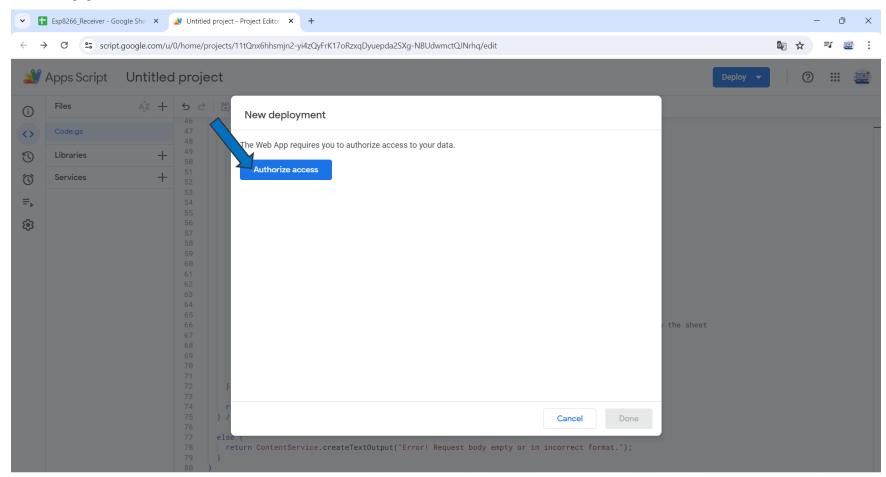


Web app

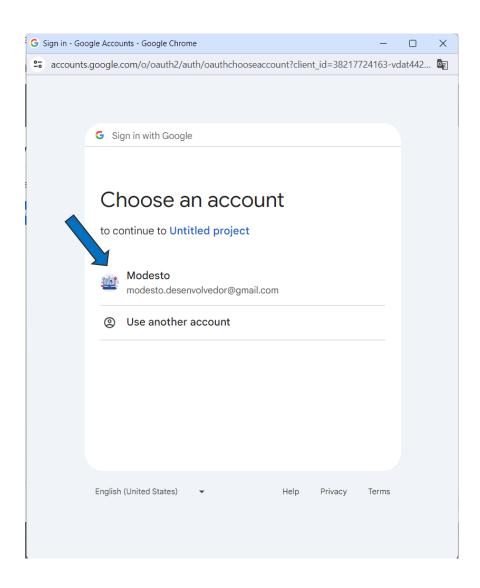




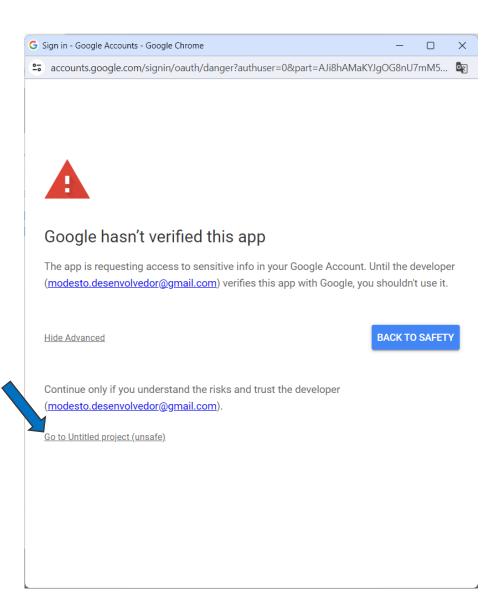
Web app



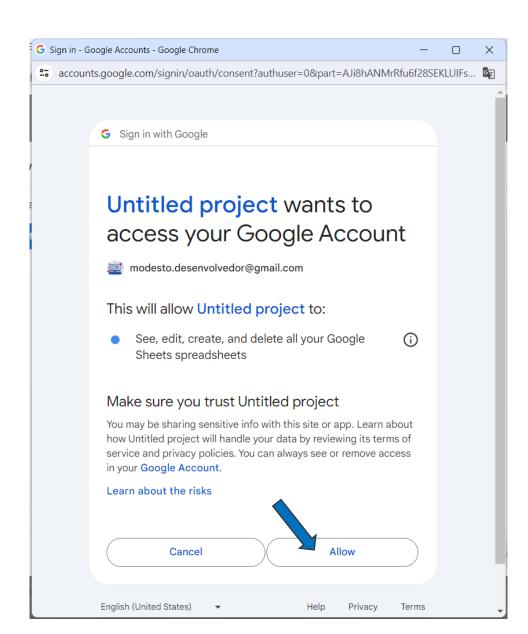




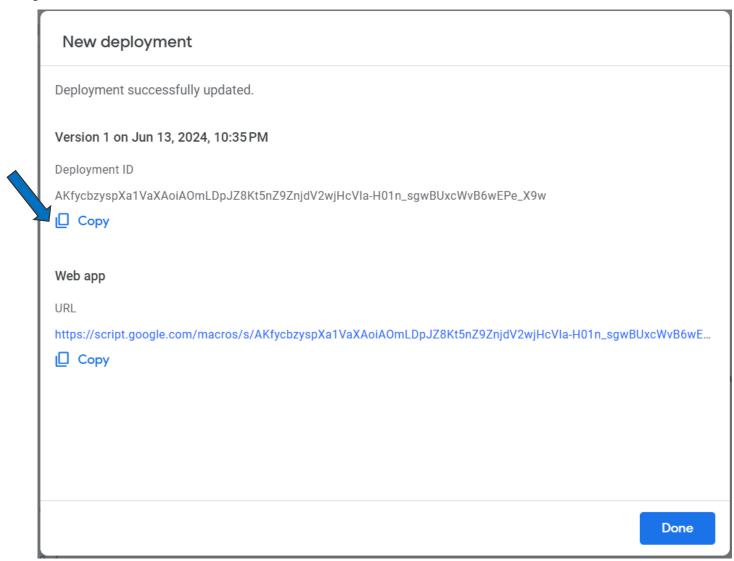






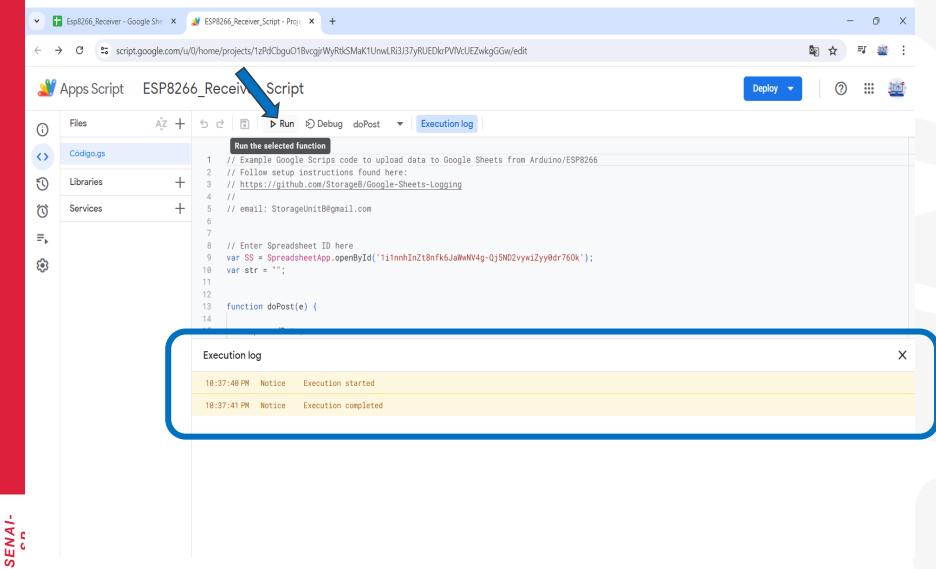






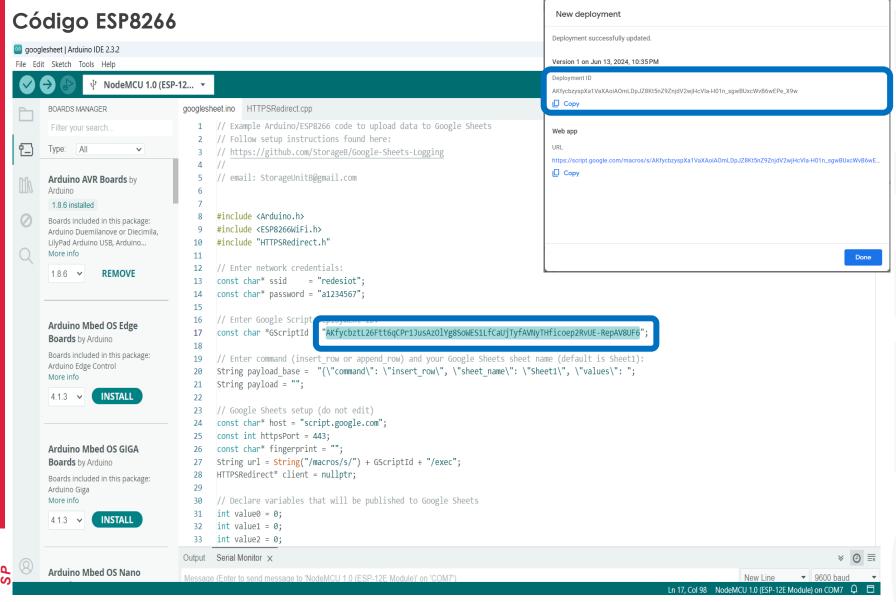






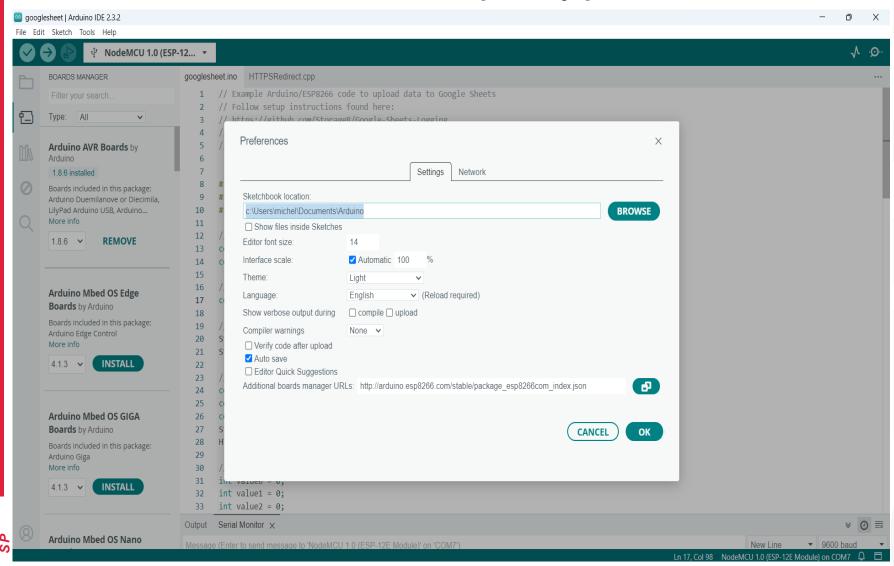


Autorização – Google Sheets



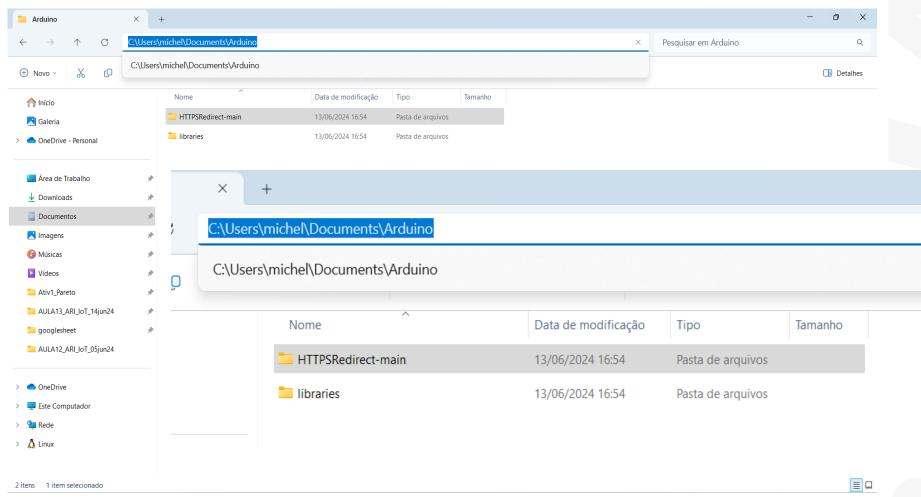


Menu → Preferences → Sketchbook location (Endereço)

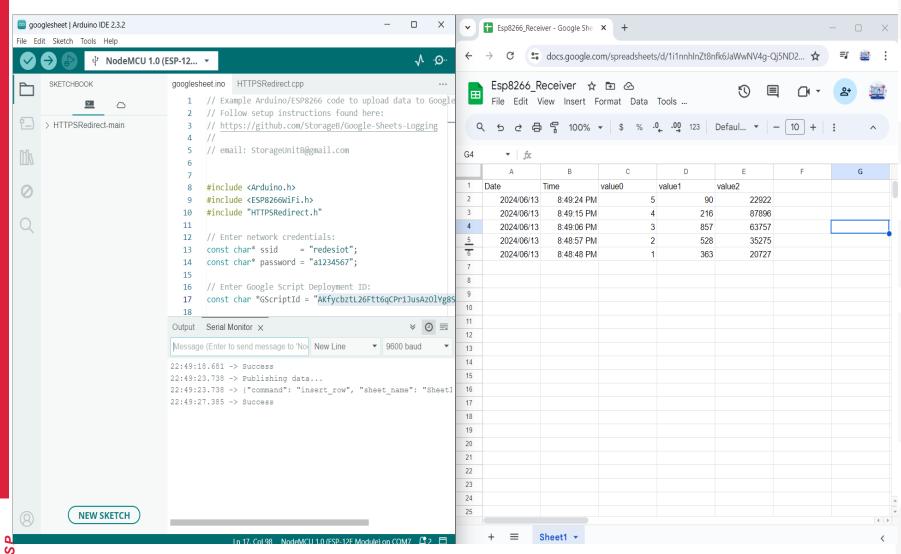




Código ESP8266







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