```cpp
#include <ESP8266WiFi.h>


String apiKey = "**************";

const char* ssid =  "**************";     // Enter your WiFi Network's SSID

const char* pass =  "**************"; // Enter your WiFi Network's Password

const char* server = "api.thingspeak.com";


int analogInPin  = A0;    // Analog input pin

int sensorValue;          // Analog Output of Sensor

float calibration = 0.36; // Check Battery voltage using multimeter & add/subtract the value

int bat_percentage;


WiFiClient client;


void setup()
{
  Serial.begin(115200);

  Serial.println("Connecting to ");

  Serial.println(ssid);

  WiFi.begin(ssid, pass);


  while (WiFi.status() != WL_CONNECTED)

  {

    delay(100);

    Serial.print("*");

  }
```

```
27  Serial.println("");

28  Serial.println("WiFi connected");

29 }

30

31 void loop()

32 {

33  sensorValue = analogRead(analogInPin);

34  float voltage = (((sensorValue * 3.3) / 1024) * 2 + calibration); //multiply by two as voltage divider
35  network is 100K & 100K Resistor

36

37  bat_percentage = mapfloat(voltage, 2.8, 4.2, 0, 100); //2.8V as Battery Cut off Voltage & 4.2V as
    Maximum Voltage

38

39  if (bat_percentage >= 100)

40  {

41    bat_percentage = 100;

42  }

43  if (bat_percentage <= 0)

44  {

45    bat_percentage = 1;

46  }

47

48  Serial.print("Analog Value = ");

49  Serial.print(sensorValue);

50  Serial.print("\t Output Voltage = ");

51  Serial.print(voltage);

52  Serial.print("\t Battery Percentage = ");
```

```arduino
53  Serial.println(bat_percentage);

54  delay(1000);

55

56  if (client.connect(server, 80))

57  {

58

59    String postStr = apiKey;

60    postStr += "&field1=";

61    postStr += String(voltage);

62    postStr += "&field2=";

63    postStr += String(bat_percentage);

64    postStr += "\r\n\r\n";

65

66    client.print("POST /update HTTP/1.1\n");

67    delay(100);

68    client.print("Host: api.thingspeak.com\n");

69    delay(100);

70    client.print("Connection: close\n");

71    delay(100);

72    client.print("X-THINGSPEAKAPIKEY: " + apiKey + "\n");

73    delay(100);

74    client.print("Content-Type: application/x-www-form-urlencoded\n");

75    delay(100);

76    client.print("Content-Length: ");

77    delay(100);

78    client.print(postStr.length());
```

```
79    delay(100);

80    client.print("\n\n");

81    delay(100);

82    client.print(postStr);

83    delay(100);

84  }

85  client.stop();

86  Serial.println("Sending....");

87  delay(15000);

88 }

89

90 float mapfloat(float x, float in_min, float in_max, float out_min, float out_max)

91 {

92  return (x - in_min) * (out_max - out_min) / (in_max - in_min) + out_min;

   }
```