

Python code:

#Installing necessary libraries

```
import wiotp.sdk.device
```

```
import time
```

```
import random
```

```
import requests
```

```
import math
```

#Configuration details for connecting python script to IBM Watson IOT Platform

```
myConfig = {
```

```
  "identity": {
```

```
    "orgId": "cdmqwf",
```

```
    "typeId": "pythoncode",
```

```
    "deviceId": "252525"
```

```
  },
```

```
  "auth": {
```

```
    "token": "12345678"
```

```
  } }
```

```
def myCommandCallback(cmd):
```

```
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
```

```
    m=cmd.data['command']
```

#Connecting the client to ibm watson iot platform

```
client = wiotp.sdk.device.DeviceClient(config=myConfig,logHandlers=None)
```

```
client.connect()
```

#Generate Random values for latitude, longitude in a circular distribution from the

current location and

#alert the garbage collector to go to the particular location where the bin level and

bin weight exceeds the threshold

```
while True:
```

```
    res = requests.get("https://ipinfo.io/")
```

```
    data = res.json()
```

```
    loc = data['loc'].split(',')
```

```
    theta = random.uniform(0,2*math.pi)
```

```
    area = (0.05**2)*math.pi
```

```
    radius = math.sqrt(random.uniform(0,area/math.pi))
```

```

latitude,longitude = [float(loc[0])+radius*math.cos(theta),
float(loc[1])+radius*math.sin(theta)]
binlevel=random.randint(10,100)
binweight = random.randint(50,1500)
if binweight>=1000 and binlevel>80:
    myData={'latitude':latitude, 'longitude':longitude,'binlevel':binlevel,
'binweight':binweight}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=
0, onPublish=None)
##print("Published data Successfully: %s", myData)
print("BIN IS FULL..TIME TO EMPTY IT!!!!\n",myData)
client.commandCallback = myCommandCallback
time.sleep(2)
#break
else :
    print("BIN IS IN NORMAL LEVEL...")
    time.sleep(2)
#Disconnect the client connection
client.disconnect()

```