

## **FINAL DELIVERABLES**

### **FINAL CODE**

Team ID	PNT2022TMID21445
Project Name	Gas Leakage monitoring & Alerting system for Industries
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### **CODE:**

```
import time import sys
import ibmiotf.application
import ibmiotf.device
import random
```

```
#Provide your IBM Watson Device Credentials organization =
"pi0ywk"
deviceType = "Gas_Geakage_Detector" deviceId = "Udayakpr007"
authMethod = "token"
authToken = "8148922991"
```

```
# Initialize GPIO
```

```
def myCommandCallback(cmd):
print("Command received: %s" % cmd.data['command'])
status=cmd.data['command']
if status == "alarmon":
print ("Alarm is on please all Evacuate Fans On")
```

```

elif status == "alarmoff":
print ("Alarm is off and Fans Off")

elif status == "sprinkleron":
print ("Sprinkler is On Evacuate Faster")
elif status == "sprinkleroff":
print("Sprinkler is Off") else:
print("Please send proper command")
#print(cmd)
try:
deviceOptions = {"org": organization, "type": deviceType, "id":
deviceId, "auth-method": authMethod, "auth-token": authToken}
deviceCli = ibmiotf.device.Client(deviceOptions)
#.....
except Exception as e:
print("Caught exception connecting device: %s" % str(e)) sys.exit()

# Connect and send a datapoint "hello" with value "world" into the
cloud as an event of type "greeting" 10 times
deviceCli.connect() while True:
#Get Sensor Data from random function
temp=random.randint(0,120) Humid=random.randint(0,100)
gas=random.randint(0,1500)
data={'temp':temp,'Humid':Humid,'gas':gas}

#print data

def myOnPublishCallback():
print (" Published Temperature = %s C" % temp, "Humidity = %s
%%" % Humid, "Gas_Level =
%s ppm" % gas, "to IBM Watson")
success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
on_publish=myOnPublishCallback)
if not success:
print("\n Not connected to IoTF") if temp>60 :
print("\n Fire Detected due to gas Leak ! Alarm ON! Sprinkler ON!
Call The Fire Police \n") elif gas>350:

```

```
print("\n Gas is Leaking \n")
time.sleep(10)
deviceCli.commandCallback = myCommandCallback
# Disconnect the device and application from the cloud
deviceCli.disconnect()
```