

## SPRINT-3

### PROGRAM FOR FIRE DETECTION

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A screenshot of a Python IDE window titled 'fire detection,arduino.py - C:\Users\user\Desktop\fire detection\python script, fire detection\fire detection,arduino.py (2.7.1)'. The menu bar includes File, Edit, Format, Run, Options, Window, and Help. The 'Run' menu is open, showing options: Python Shell, Check Module Alt+X, and Run Module F5 (highlighted in blue). The code in the editor is as follows:

```
#code written by S-TRONiX Tech on 13/4/2018
#S-TRONiX Tech, Nagpur, MH, INDIA

import numpy as np
import cv2
import serial
import time

fire_cascade = cv2.CascadeClassifier('fire_detection.xml')
#fire_detection.xml file & this code should be in the same folder while running the code

ser1 = serial.Serial('COM14',9600)#change COM port number on which your arduino is connected

cap = cv2.VideoCapture(0)
while 1:
    #ser1.write('0')
    ret, img = cap.read()
    #cv2.imshow('imgoriginal',img)
    gray = cv2.cvtColor(img,cv2.COLOR_BGR2GRAY)
    fire = fire_cascade.detectMultiScale(img, 1.2, 5)
```