Smoke Detection using IOT Dataset

Technical Documentation

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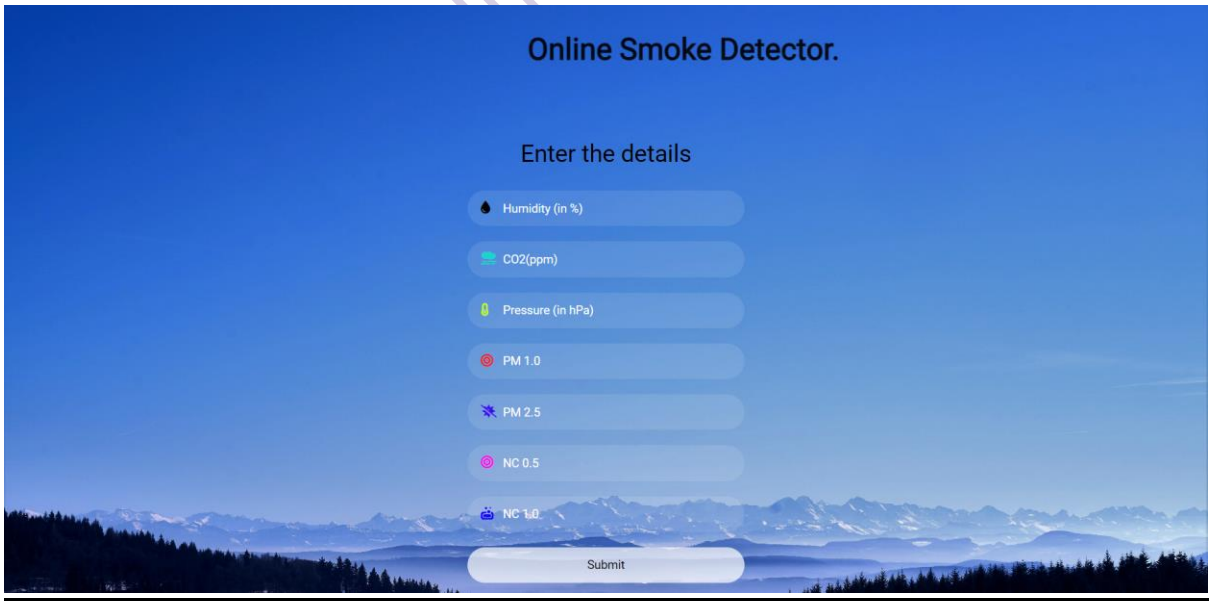
Prerequires for the developer:

The developer should have an inordinate knowledge of Python, Flask and various other libraries of the web development, like the pickle and other libraries.

He/she should also be aware of the data science tools and techniques, like the matplotlib and seaborn.

User Interface.



Technical interface

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.4.0/css/all.mi
    <link rel="stylesheet" type="text/css" href="static/styles/style.css">
    <link rel="preconnect" href="https://fonts.googleapis.com">
    <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>
    <link href="https://fonts.googleapis.com/css2?family=Roboto&display=swap" rel="stylesheet">
    <title>Smoke Detector</title>
</head>

<body>
    <marquee class="blink">
        <h1>Online Smoke Detector.</h1>
    </marquee>
    <div class="box">
        <div class="container">
            <div class="top">
                <header style="color: black">Enter the details</header>
```

```
from flask import Flask, render_template, request
import pickle
import numpy as np

app = Flask(__name__)
model = pickle.load(open('model.pkl', 'rb'))


@app.route('/')
def hello_world():
    return render_template('index.html')


@app.route("/predict", methods=["POST"])
def predict():
    float_features = [float(x) for x in request.form.values()]
    final = np.array(float_features, ndmin=2)
    prediction = model.predict(final)
    res = str(prediction[0])
    if res == '0':
        ans = "not detected"
    else:
        ans = "detected"
```

```
 * Serving Flask app 'app'
 * Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
 * Running on http://127.0.0.1:5100
Press CTRL+C to quit
 * Restarting with watchdog (windowsapi)
 * Debugger is active!
 * Debugger PIN: 934-468-725
```

Repair Manual/ video links.

https://drive.google.com/file/d/1E9FCHwj3S-G4oPzUYEFwLOjJK2K0o63C/view?usp=drive_link

https://youtu.be/iJ4hQezx2W0

END