STEP 1 (Anaconda Promt)

**Open Anaconda Prompt & Create a Virtual Environment** (Optional but recommended)

conda create --name streamlit-env python=3.9

conda activate streamlit-env

Step 1.1 is about **setting up the environment** properly before running the Streamlit app. This ensures:

1. **Isolation of Dependencies**: Creating a virtual environment prevents conflicts between different versions of Python packages.
2. **Installation of Required Libraries**: Installing the necessary libraries (streamlit, pandas, plotly, etc.) ensures that your code runs smoothly.
3. **Ensuring Compatibility**: Different systems may have different versions of Python and libraries. A virtual environment ensures that all dependencies remain consistent.
4.  conda create: Creates a new environment.
5.  --name streamlit-env: Names the environment as **"streamlit-env"**.
6.  python=3.9: Specifies that the environment should use **Python 3.9** (a stable version for Streamlit).
7. conda activate: Switches from the base environment to **"streamlit-env"** so that all packages are installed here instead of the global Python installation.

Step 1.2 Run the following command in **Anaconda Prompt** to install necessary libraries:

pip install streamlit pandas plotly matplotlib seaborn folium

This installs:

* streamlit → For building the web app.
* pandas → For handling and processing the dataset.
* plotly → For interactive visualizations.
* matplotlib → For static visualizations.
* seaborn → For statistical plotting (e.g., heatmaps).

Step 1.3 Enter the path in Anaconda and Run

cd C:\BIDM\Air\_Pollution

streamlit run Indian\_Air\_Pollution\_Checker.py

**STEP 2 (Spyder)**

Load the Library,

Title Plus Image Plus Video

and explore the dataset

import streamlit as st

import pandas as pd

import plotly.express as px

import matplotlib.pyplot as plt

import seaborn as sns

st.title("Indian Air Pollution Checker App")

st.text('Alarming Air Quality Crisis: City-wise Breakdown of India"s Polluted Urban Centers')

st.image("Pollution.jpg")

st.video('https://youtu.be/3gbJRF6d604?si=MZ\_sjw85NKgvyEA')

df = pd.read\_csv("air\_pollution\_data.csv")

print(df.head()) # Check first few rows

print(df.columns) # See column names

**STEP 3 (Spyder)**

**Creating the app features**

**# Dropdown to select city**

**cities = df['city'].unique()**

**selected\_city = st.selectbox("Select a city", cities)**

**# Filter data based on selected city**

**filtered\_data = df[df['city'] == selected\_city]**

**# Line chart for pollution levels over time**

**fig = px.line(filtered\_data, x="date", y="pm2.5", title=f"PM2.5 Levels in {selected\_city}")**

**st.plotly\_chart(fig)**

**# Display raw data if user wants**

**if st.checkbox("Show raw data"):**

**st.write(filtered\_data)**

**Step 4 (Github) and make a connection with streamlit**

Create Github Repository

**Step 5 (Streamlit)**

Diploy via steamlit