Data Checkpoint & Interactive Presentation Design
Data Checkpoint

Data:

I use 2 source data:

1. Historical Weather API (daily) needs an API key I have not used before. Nearly 4-month (120 records) for daily weather data, including wind, rain, sunshine……


```
{
    "timezone": "America/New_York",
    "state_code": "NC",
    "country_code": "US",
    "lat": 35.7721,
    "lon": -78.63861,
    "city_name": "Raleigh",
    "station_id": "723060-13722",
    "data": [
        {
            "rh": 89.7,
            "max_wind_spd_ts": 1629140400,
            "t_ghi": 7641.4,
            "max_wind_spd": 4.6,
            "solar_rad": 125.4,
            "wind_gust_spd": 4.6,
            "max_temp_ts": 1629140400,
            "min_temp_ts": 1629097200,
            "clouds": 97,
            "max_dni": 921.7,
            "precip_gpm": 4,
            "wind_spd": 1.8,
            "slp": 1019.5,
            "ts": 1629086400,
            "max_ghi": 963,
            "temp": 25.1,
            "pres": 1004.2,
            "dni": 409.6,
            "dewpt": 23,
            "snow": 0,
            "dhi": 51.4,
            "precip": 4,
            "wind_dir": 121,
            "max_dhi": 122.1,
            "ghi": 318.4,
            "max_temp": 31.7,
            "t_dni": 9830.8,
            "max_uv": 4.1,
            "t_dhi": 1232.7,
            "datetime": "2021-08-16",
            "t_solar_rad": 3010.6,
            "min_temp": 22.2,
            "max_wind_dir": 121,
            "snow_depth": null
        },
        {
            "rh": 91,
```


Capture of a record of Historical Weather data

2. AirVisual API needs an API key I have not used before. Nearly 323 records for air quality data for cities in the US.

```
{
    "Alabama": [
        "Birmingham",
        "Cuba",
        "Decatur",
        "Empire",
        "Homewood",
        "Hoover",
        "Huntsville",
        "Irondale",
        "Madison",
        "McCalla",
        "Mobile",
        "Montgomery",
        "Tillmans Corner",
        "Uniontown"
    ],
    "Alaska": [
        "Anchor Point",
        "Anchorage",
        "Barrow",
        "College",
        "Dillingham",
        "Eagle River",
        "Ester",
        "Fairbanks",
        "Farmers Loop",
        "Haines",
        "Healy",
        "Homer",
        "Juneau",
        "Ketchikan",
        "Knik-Fairview",
        "Kotzebue",
        "Nome",
        "North Pole",
        "Palmer",
        "Tok",
        "Valdez",
        "Willow"
    ],
    "Arizona": [
        "Ajo",
```


Air quality data-city

Air quality data-one city detailed data

I attached the json.file to submit to this check point.

Interactive Presentation Design:

Describing your plans for implementing interactive presentation capabilities, including user options supported and presentation types.

I will present data by using both 1) userCommand Line interface 2) plotly visualization graph

When users input some input and answer the question asked by the Tree I defined, our interface will automatically show them >= 4 visualization pics/graphs/plots about the different categories of weather and the Air quality according to the user's answer/position/yes or no input.