In [1]:

**import** pandas **as** pd

**import** numpy **as** np

In [104]:

df**=**pd.read\_csv("C:/Users/DELL/Desktop/1. Weather Data.csv",parse\_dates**=**["Date/Time"]) df.head()

Out[104]:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Date/Time** | **Temp\_C** | **Dew Point Temp\_C** | **Rel Hum\_%** | **Wind Speed\_km/h** | **Visibility\_km** | **Press\_kPa** | **Weather** |
| **0** 2012-01-01 00:00:00 | -1.8 | -3.9 | 86 | 4 | 8.0 | 101.24 | Fog |
| **1** 2012-01-01 01:00:00 | -1.8 | -3.7 | 87 | 4 | 8.0 | 101.24 | Fog |
| **2** 2012-01-01 02:00:00 | -1.8 | -3.4 | 89 | 7 | 4.0 | 101.26 | Freezing Drizzle,Fog |
| **3** 2012-01-01 03:00:00 | -1.5 | -3.2 | 88 | 6 | 4.0 | 101.27 | Freezing Drizzle,Fog |
| **4** 2012-01-01 04:00:00 | -1.5 | -3.3 | 88 | 7 | 4.8 | 101.23 | Fog |

In [17]:

df.info()

<class 'pandas.core.frame.DataFrame'> RangeIndex: 8784 entries, 0 to 8783

Data columns (total 8 columns):

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| # |  | Column | Non-Null Count |  | Dtype |
| 0 |  | Date/Time | 8784 non-null |  | datetime64[ns] |
| 1 |  | Temp\_C | 8784 non-null |  | float64 |
| 2 |  | Dew Point Temp\_C | 8784 non-null |  | float64 |
| 3 |  | Rel Hum\_% | 8784 non-null |  | int64 |
| 4 |  | Wind Speed\_km/h | 8784 non-null |  | int64 |
| 5 |  | Visibility\_km | 8784 non-null |  | float64 |
| 6 |  | Press\_kPa | 8784 non-null |  | float64 |
| 7 |  | Weather | 8784 non-null |  | object |

dtypes: datetime64[ns](1), float64(4), int64(2), object(1) memory usage: 549.1+ KB

In [18]:

df.describe()

Out[18]:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Temp\_C** | **Dew Point Temp\_C** | **Rel Hum\_%** | **Wind Speed\_km/h** | **Visibility\_km** | **Press\_kPa** |
| **count** 8784.000000 | 8784.000000 | 8784.000000 | 8784.000000 | 8784.000000 | 8784.000000 |
| **mean** 8.798144 | 2.555294 | 67.431694 | 14.945469 | 27.664447 | 101.051623 |
| **std** 11.687883 | 10.883072 | 16.918881 | 8.688696 | 12.622688 | 0.844005 |
| **min** -23.300000 | -28.500000 | 18.000000 | 0.000000 | 0.200000 | 97.520000 |
| **25%** 0.100000 | -5.900000 | 56.000000 | 9.000000 | 24.100000 | 100.560000 |
| **50%** 9.300000 | 3.300000 | 68.000000 | 13.000000 | 25.000000 | 101.070000 |
| **75%** 18.800000 | 11.800000 | 81.000000 | 20.000000 | 25.000000 | 101.590000 |
| **max** 33.000000 | 24.400000 | 100.000000 | 83.000000 | 48.300000 | 103.650000 |
| In [19]: |  |  |  |  |  |
| df.shape |  |  |  |  |  |
| Out[19]: |  |  |  |  |  |

(8784, 8)

In [20]:

df.columns

Out[20]:

Index(['Date/Time', 'Temp\_C', 'Dew Point Temp\_C', 'Rel Hum\_%',

'Wind Speed\_km/h', 'Visibility\_km', 'Press\_kPa', 'Weather'], dtype='object')

In [21]:

df.index

Out[21]:

RangeIndex(start=0, stop=8784, step=1)

In [22]:

df.dtypes

Out[22]:

Date/Time datetime64[ns] Temp\_C float64

Dew Point Temp\_C float64

Rel Hum\_% int64

Wind Speed\_km/h int64

Visibility\_km float64

Press\_kPa float64

Weather object

dtype: object

In [24]:

df["Weather"].unique()

Out[24]:

array(['Fog', 'Freezing Drizzle,Fog', 'Mostly Cloudy', 'Cloudy', 'Rain', 'Rain Showers', 'Mainly Clear', 'Snow Showers', 'Snow', 'Clear', 'Freezing Rain,Fog', 'Freezing Rain', 'Freezing Drizzle',

'Rain,Snow', 'Moderate Snow', 'Freezing Drizzle,Snow',

'Freezing Rain,Snow Grains', 'Snow,Blowing Snow', 'Freezing Fog', 'Haze', 'Rain,Fog', 'Drizzle,Fog', 'Drizzle',

'Freezing Drizzle,Haze', 'Freezing Rain,Haze', 'Snow,Haze',

'Snow,Fog', 'Snow,Ice Pellets', 'Rain,Haze', 'Thunderstorms,Rain', 'Thunderstorms,Rain Showers', 'Thunderstorms,Heavy Rain Showers', 'Thunderstorms,Rain Showers,Fog', 'Thunderstorms',

'Thunderstorms,Rain,Fog',

'Thunderstorms,Moderate Rain Showers,Fog', 'Rain Showers,Fog', 'Rain Showers,Snow Showers', 'Snow Pellets', 'Rain,Snow,Fog', 'Moderate Rain,Fog', 'Freezing Rain,Ice Pellets,Fog',

'Drizzle,Ice Pellets,Fog', 'Drizzle,Snow', 'Rain,Ice Pellets',

'Drizzle,Snow,Fog', 'Rain,Snow Grains', 'Rain,Snow,Ice Pellets', 'Snow Showers,Fog', 'Moderate Snow,Blowing Snow'], dtype=object)

|  |  |
| --- | --- |
| In [25]: |  |
| df.nunique() |
| Out[25]: |
| Date/Time | 8784 |
| Temp\_C | 533 |
| Dew Point Temp\_C | 489 |
| Rel Hum\_% | 83 |
| Wind Speed\_km/h | 34 |
| Visibility\_km | 24 |
| Press\_kPa | 518 |
| Weather  dtype: int64 | 50 |
| In [26]: |  |
| df.count() |  |
| Out[26]: |  |
| Date/Time | 8784 |
| Temp\_C | 8784 |
| Dew Point Temp\_C | 8784 |
| Rel Hum\_% | 8784 |
| Wind Speed\_km/h | 8784 |
| Visibility\_km | 8784 |
| Press\_kPa | 8784 |
| Weather  dtype: int64 | 8784 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| df["Weather"].value\_counts() |  | | | | |
| Out[31]: |  |  |  |  |  |
| Mainly Clear | 2106 |  |  |  |  |
| Mostly Cloudy | 2069 |  |  |  |  |
| Cloudy | 1728 |  |  |  |  |
| Clear | 1326 |  |  |  |  |
| Snow | 390 |  |  |  |  |
| Rain | 306 |  |  |  |  |
| Rain Showers | 188 |  |  |  |  |
| Fog | 150 |  |  |  |  |
| Rain,Fog | 116 |  |  |  |  |
| Drizzle,Fog | 80 |  |  |  |  |
| Snow Showers | 60 |  |  |  |  |
| Drizzle | 41 |  |  |  |  |
| Snow,Fog | 37 |  |  |  |  |
| Snow,Blowing Snow | 19 |  |  |  |  |
| Rain,Snow | 18 |  |  |  |  |
| Thunderstorms,Rain Showers | 16 |  |  |  |  |
| Haze | 16 |  |  |  |  |
| Drizzle,Snow,Fog | 15 |  |  |  |  |
| Freezing Rain | 14 |  |  |  |  |
| Freezing Drizzle,Snow | 11 |  |  |  |  |
| Freezing Drizzle | 7 |  |  |  |  |
| Snow,Ice Pellets | 6 |  |  |  |  |
| Freezing Drizzle,Fog | 6 |  |  |  |  |
| Snow,Haze | 5 |  |  |  |  |
| Freezing Fog | 4 |  |  |  |  |
| Snow Showers,Fog | 4 |  |  |  |  |
| Moderate Snow | 4 |  |  |  |  |
| Rain,Snow,Ice Pellets | 4 |  |  |  |  |
| Freezing Rain,Fog | 4 |  |  |  |  |
| Freezing Drizzle,Haze | 3 |  |  |  |  |
| Rain,Haze | 3 |  |  |  |  |
| Thunderstorms,Rain | 3 |  |  |  |  |
| Thunderstorms,Rain Showers,Fog | 3 |  |  |  |  |
| Freezing Rain,Haze | 2 |  |  |  |  |
| Drizzle,Snow | 2 |  |  |  |  |
| Rain Showers,Snow Showers | 2 |  |  |  |  |
| Thunderstorms | 2 |  |  |  |  |
| Moderate Snow,Blowing Snow | 2 |  |  |  |  |
| Rain Showers,Fog | 1 |  |  |  |  |
| Thunderstorms,Moderate Rain Showers,Fog | 1 |  |  |  |  |
| Snow Pellets | 1 |  |  |  |  |
| Rain,Snow,Fog | 1 |  |  |  |  |
| Moderate Rain,Fog | 1 |  |  |  |  |
| Freezing Rain,Ice Pellets,Fog | 1 |  |  |  |  |
| Drizzle,Ice Pellets,Fog | 1 |  |  |  |  |
| Thunderstorms,Rain,Fog | 1 |  |  |  |  |
| Rain,Ice Pellets | 1 |  |  |  |  |
| Rain,Snow Grains | 1 |  |  |  |  |
| Thunderstorms,Heavy Rain Showers | 1 |  |  |  |  |
| Freezing Rain,Snow Grains  Name: Weather, dtype: int64 | 1 |  |  |  |  |
| In [32]: |  |  |  |  |  |
| *#findthe unique values of windspeed*  df.head(2) |  |  |  |  |  |
| Out[32]: |  |  |  |  |  |
| **Date/Time Temp\_C Dew Point Temp\_C** | **Rel Hum\_%** | **Wind Speed\_km/h** | **Visibility\_km** | **Press\_kPa** | **Weather** |
| **0** 2012-01-01 00:00:00 -1.8 -3.9 | 86 | 4 | 8.0 | 101.24 | Fog |
| **1** 2012-01-01 01:00:00 -1.8 -3.7 | 87 | 4 | 8.0 | 101.24 | Fog |
| In [35]: |  |  |  |  |  |

df["Wind Speed\_km/h"].unique()

Out[35]:

array([ 4, 7, 6, 9, 15, 13, 20, 22, 19, 24, 30, 35, 39, 32, 33, 26, 44,

43, 48, 37, 28, 17, 11, 0, 83, 70, 57, 46, 41, 52, 50, 63, 54, 2],

dtype=int64)

In [36]:

*# to count the unique values*

df["Wind Speed\_km/h"].nunique()

Out[36]:

34

|  |  |
| --- | --- |
| *#find the number of times when the "weather is exactly clear"*  df["Weather"][df["Weather"]**==**"Clear"].count() | |
| Out[63]: |  |
| 1326 |  |
| In [64]: |  |
| df["Weather"].value\_counts() |  |
| Out[64]: |  |
| Mainly Clear | 2106 |
| Mostly Cloudy | 2069 |
| Cloudy | 1728 |
| Clear | 1326 |
| Snow | 390 |
| Rain | 306 |
| Rain Showers | 188 |
| Fog | 150 |
| Rain,Fog | 116 |
| Drizzle,Fog | 80 |
| Snow Showers | 60 |
| Drizzle | 41 |
| Snow,Fog | 37 |
| Snow,Blowing Snow | 19 |
| Rain,Snow | 18 |
| Thunderstorms,Rain Showers | 16 |
| Haze | 16 |
| Drizzle,Snow,Fog | 15 |
| Freezing Rain | 14 |
| Freezing Drizzle,Snow | 11 |
| Freezing Drizzle | 7 |
| Snow,Ice Pellets | 6 |
| Freezing Drizzle,Fog | 6 |
| Snow,Haze | 5 |
| Freezing Fog | 4 |
| Snow Showers,Fog | 4 |
| Moderate Snow | 4 |
| Rain,Snow,Ice Pellets | 4 |
| Freezing Rain,Fog | 4 |
| Freezing Drizzle,Haze | 3 |
| Rain,Haze | 3 |
| Thunderstorms,Rain | 3 |
| Thunderstorms,Rain Showers,Fog | 3 |
| Freezing Rain,Haze | 2 |
| Drizzle,Snow | 2 |
| Rain Showers,Snow Showers | 2 |
| Thunderstorms | 2 |
| Moderate Snow,Blowing Snow | 2 |
| Rain Showers,Fog | 1 |
| Thunderstorms,Moderate Rain Showers,Fog | 1 |
| Snow Pellets | 1 |
| Rain,Snow,Fog | 1 |
| Moderate Rain,Fog | 1 |
| Freezing Rain,Ice Pellets,Fog | 1 |
| Drizzle,Ice Pellets,Fog | 1 |
| Thunderstorms,Rain,Fog | 1 |
| Rain,Ice Pellets | 1 |
| Rain,Snow Grains | 1 |
| Thunderstorms,Heavy Rain Showers | 1 |
| Freezing Rain,Snow Grains  Name: Weather, dtype: int64 | 1 |
| In [78]: |  |

df.groupby("Weather").get\_group("Clear").count()

|  |  |
| --- | --- |
| Out[78]: |  |
| Date/Time | 1326 |
| Temp\_C | 1326 |
| Dew Point Temp\_C | 1326 |
| Rel Hum\_% | 1326 |
| Wind Speed\_km/h | 1326 |
| Visibility\_km | 1326 |
| Press\_kPa | 1326 |
| Weather | 1326 |
| dtype: int64 |  |

*#Number of times the windspeed was extractly 4 kmph*

df.head(2)

Out[79]:

**Date/Time Temp\_C Dew Point Temp\_C Rel Hum\_% Wind Speed\_km/h Visibility\_km Press\_kPa Weather 0** 2012-01-01 00:00:00 -1.8 -3.9 86 4 8.0 101.24 Fog

**1** 2012-01-01 01:00:00 -1.8 -3.7 87 4 8.0 101.24 Fog

In [87]:

df["Wind Speed\_km/h"][df["Wind Speed\_km/h"]**==**4].count()

Out[87]:

474

In [88]:

*#Null values*

df.isnull().sum()

Out[88]:

Date/Time 0

Temp\_C 0

Dew Point Temp\_C 0

Rel Hum\_% 0

Wind Speed\_km/h 0

Visibility\_km 0

Press\_kPa 0

Weather 0

dtype: int64

In [89]:

df.notnull().sum()

Out[89]:

Date/Time 8784

Temp\_C 8784

Dew Point Temp\_C 8784

Rel Hum\_% 8784

Wind Speed\_km/h 8784

Visibility\_km 8784

Press\_kPa 8784

Weather 8784

dtype: int64

In [92]:

*#To rename Weather column name to "Weather Condition"*

new\_df**=**df.rename(columns**=**{"Weather":"Weather Condition"}) new\_df

Out[92]:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Date/Time** | **Temp\_C** | **Dew Point Temp\_C** | **Rel Hum\_%** | **Wind Speed\_km/h** | **Visibility\_km** | **Press\_kPa** | **Weather Condition** |
| **0** | 2012-01-01 00:00:00 | -1.8 | -3.9 | 86 | 4 | 8.0 | 101.24 | Fog |
| **1** | 2012-01-01 01:00:00 | -1.8 | -3.7 | 87 | 4 | 8.0 | 101.24 | Fog |
| **2** | 2012-01-01 02:00:00 | -1.8 | -3.4 | 89 | 7 | 4.0 | 101.26 | Freezing Drizzle,Fog |
| **3** | 2012-01-01 03:00:00 | -1.5 | -3.2 | 88 | 6 | 4.0 | 101.27 | Freezing Drizzle,Fog |
| **4** | 2012-01-01 04:00:00 | -1.5 | -3.3 | 88 | 7 | 4.8 | 101.23 | Fog |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... |
| **8779** | 2012-12-31 19:00:00 | 0.1 | -2.7 | 81 | 30 | 9.7 | 100.13 | Snow |
| **8780** | 2012-12-31 20:00:00 | 0.2 | -2.4 | 83 | 24 | 9.7 | 100.03 | Snow |
| **8781** | 2012-12-31 21:00:00 | -0.5 | -1.5 | 93 | 28 | 4.8 | 99.95 | Snow |
| **8782** | 2012-12-31 22:00:00 | -0.2 | -1.8 | 89 | 28 | 9.7 | 99.91 | Snow |
| **8783** | 2012-12-31 23:00:00 | 0.0 | -2.1 | 86 | 30 | 11.3 | 99.89 | Snow |

8784 rows × 8 columns

*# what is mean for "Visibilty"*

df["Visibility\_km"].mean()

Out[93]:

27.664446721311478

In [94]:

*#What is standard deviation of pressure?*

df["Press\_kPa"].std()

Out[94]:

0.8440047459486483

In [95]:

*#What is Variance of relative humdity?*

df["Rel Hum\_%"].var()

Out[95]:

286.24855019850196

In [97]:

*#Find the instance when snow is recorded?*

df.head(2)

Out[97]:

**Date/Time Temp\_C Dew Point Temp\_C Rel Hum\_% Wind Speed\_km/h Visibility\_km Press\_kPa Weather 0** 2012-01-01 00:00:00 -1.8 -3.9 86 4 8.0 101.24 Fog

**1** 2012-01-01 01:00:00 -1.8 -3.7 87 4 8.0 101.24 Fog

In [105]:

df["Weather"][df["Weather"]**==**"Snow"].count()

Out[105]:

390

In [107]:

df["Weather"][df["Weather"]**==**"Snow"].value\_counts()

Out[107]:

Snow 390

Name: Weather, dtype: int64

In [110]:

*# when snow word is present*

df[df["Weather"].str.contains("Snow")]

Out[110]:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Date/Time** | **Temp\_C** | **Dew Point Temp\_C** | **Rel Hum\_%** | **Wind Speed\_km/h** | **Visibility\_km** | **Press\_kPa** | **Weather** |
| **41** | 2012-01-02 17:00:00 | -2.1 | -9.5 | 57 | 22 | 25.0 | 99.66 | Snow Showers |
| **44** | 2012-01-02 20:00:00 | -5.6 | -13.4 | 54 | 24 | 25.0 | 100.07 | Snow Showers |
| **45** | 2012-01-02 21:00:00 | -5.8 | -12.8 | 58 | 26 | 25.0 | 100.15 | Snow Showers |
| **47** | 2012-01-02 23:00:00 | -7.4 | -14.1 | 59 | 17 | 19.3 | 100.27 | Snow Showers |
| **48** | 2012-01-03 00:00:00 | -9.0 | -16.0 | 57 | 28 | 25.0 | 100.35 | Snow Showers |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... |
| **8779** | 2012-12-31 19:00:00 | 0.1 | -2.7 | 81 | 30 | 9.7 | 100.13 | Snow |
| **8780** | 2012-12-31 20:00:00 | 0.2 | -2.4 | 83 | 24 | 9.7 | 100.03 | Snow |
| **8781** | 2012-12-31 21:00:00 | -0.5 | -1.5 | 93 | 28 | 4.8 | 99.95 | Snow |
| **8782** | 2012-12-31 22:00:00 | -0.2 | -1.8 | 89 | 28 | 9.7 | 99.91 | Snow |
| **8783** | 2012-12-31 23:00:00 | 0.0 | -2.1 | 86 | 30 | 11.3 | 99.89 | Snow |

583 rows × 8 columns

*#Find instance where windspeed is above 24 and visiblity is 25*

df[(df["Wind Speed\_km/h"]**>=**24) **&** (df["Visibility\_km"]**==**25)].count()

Out[121]:

Date/Time 415

Temp\_C 415

Dew Point Temp\_C 415

Rel Hum\_% 415

Wind Speed\_km/h 415

Visibility\_km 415

Press\_kPa 415

Weather 415

dtype: int64

In [122]:

df[(df["Wind Speed\_km/h"]**>=**24) **&** (df["Visibility\_km"]**==**25)]

Out[122]:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Date/Time** | **Temp\_C** | **Dew Point Temp\_C** | **Rel Hum\_%** | **Wind Speed\_km/h** | **Visibility\_km** | **Press\_kPa** | **Weather** |
| **23** | 2012-01-01 23:00:00 | 5.3 | 2.0 | 79 | 30 | 25.0 | 99.31 | Cloudy |
| **24** | 2012-01-02 00:00:00 | 5.2 | 1.5 | 77 | 35 | 25.0 | 99.26 | Rain Showers |
| **25** | 2012-01-02 01:00:00 | 4.6 | 0.0 | 72 | 39 | 25.0 | 99.26 | Cloudy |
| **26** | 2012-01-02 02:00:00 | 3.9 | -0.9 | 71 | 32 | 25.0 | 99.26 | Mostly Cloudy |
| **27** | 2012-01-02 03:00:00 | 3.7 | -1.5 | 69 | 33 | 25.0 | 99.30 | Mostly Cloudy |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... |
| **8754** | 2012-12-30 18:00:00 | -12.6 | -16.0 | 76 | 24 | 25.0 | 101.36 | Mainly Clear |
| **8755** | 2012-12-30 19:00:00 | -13.4 | -16.5 | 77 | 26 | 25.0 | 101.47 | Mainly Clear |
| **8756** | 2012-12-30 20:00:00 | -13.8 | -16.5 | 80 | 24 | 25.0 | 101.52 | Clear |
| **8759** | 2012-12-30 23:00:00 | -12.1 | -15.1 | 78 | 28 | 25.0 | 101.52 | Mostly Cloudy |
| **8760** | 2012-12-31 00:00:00 | -11.1 | -14.4 | 77 | 26 | 25.0 | 101.51 | Cloudy |

415 rows × 8 columns

In [123]:

*#What is the mean value of each column against each weather condition.*

df.groupby("Weather").mean()

C:\Users\DELL\AppData\Local\Temp\ipykernel\_19220\3697248356.py:2: FutureWarning: The default value of numeric\_only in DataF rameGroupBy.mean is deprecated. In a future version, numeric\_only will default to False. Either specify numeric\_only or sel ect only columns which should be valid for the function.

df.groupby("Weather").mean()

Out[123]:

In [124]:

*#What is the max and min value of each***Tem***co***p***l***\_***u***C***mn***De***a***w***ga***P***i***o***n***in***s***t***t***Te***e***m***a***p***c***\_***h***C** *we***R***a***e***t***l** *h***H***e***u***r***m\_***c***%***ond***W***i***i***t***n***i***d***o***S***n***p***.***eed\_km/h Visibility\_km**

df.groupby("Weather").max() **Weather**

**Press\_kPa**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Out[124]: **Clear** | 6.825716 | 0.089367 64.497738 | | 10.557315 | 30.153243 | 101.587443 |
| **Cloudy** | 7.970544 | 2.375810 69.592593 | | 16.127315 | 26.625752 | 100.911441 |
| **Date/Time Temp\_C Dew Point Temp\_C Rel Hum\_% Wind Speed\_km/h Visibility\_km Press\_kPa** | | | | | | |
| **Drizzle** 7.353659 | | 5.504878 | 88.243902 | 16.097561 | 17.931707 | 100.435366 |
| **Weather**  **Drizzle,Fog** 8.067500 | | 7.033750 | 93.275000 | 11.862500 | 5.257500 | 100.786625 |

**Clear** 2012-12-30 20:00:00 32.8

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 20.4 99 33  20.000000 4.000000 100.790000 | | | | 48.3 | 103.63 |
| 22.6 99 54  14.000000 10.500000 100.890000 | | | | 48.3 | 103.65 |
| 17.7 96 30  15.533333 5.513333 99.281333 | | | | 25.0 | 101.56 |
| 19.1 100 28  7.946667 6.248000 101.184067 | | | | 9.7 | 102.07 |
| -0.7 92 20  16.571429 9.200000 100.202857 | | | | 4.0 | 100.79 |
| 0.2 95 19  17.000000 5.266667 100.441667 | | | | 11.3 | 101.15 |
| 0.6 98 32  10.333333 2.666667 100.316667 | | | | 9.7 | 100.15 |
| 19.6 100 22  16.272727 5.872727 100.520909 | | | | 9.7 | 103.04 |
| -3.3 93 26  4.750000 0.650000 102.320000 | | | | 12.9 | 101.02 |
| -2.3 94 33  19.214286 8.242857 99.647143 | | | | 8.0 | 101.27 |
| -7.7 83 11  15.500000 7.550000 99.945000 | | | | 4.0 | 100.36 |
| -4.6 94 24  7.500000 2.400000 100.375000 | | | | 12.9 | 101.18 |
| -0.3 99 9  28.000000 8.000000 100.950000 | | | | 0.8 | 102.85 |
| -1.7 92 28  32.000000 4.800000 98.560000 | | | | 16.1 | 101.00 |
| -0.9 93 26  10.437500 7.831250 101.482500 | | | | 9.7 | 101.01 |
| -7.4 83 9  14.144824 34.264862 101.248832 | | | | 2.8 | 100.41 |
| -3.7 92 28  17.000000 6.400000 99.980000 | | | | 8.0 | 100.95 |
| -7.3 84 32  33.750000 0.750000 100.275000 | | | | 4.8 | 98.56 |
| 11.1 86 17  40.000000 0.600000 100.570000 | | | | 9.7 | 102.97 |
| 21.2 99 63  15.813920 31.253842 101.025288 | | | | 48.3 | 103.59 |
| 0.8 94 17  19.254902 18.856536 100.233333 | | | | 6.4 | 99.98 |
| -6.7 93 39  17.132979 22.816489 100.404043 | | | | 0.8 | 100.67 |
| -6.4 93 41  13.000000 6.400000 99.830000 | | | | 0.6 | 100.64 |
| 24.4 100 83  22.500000 21.700000 101.100000 | | | | 48.3 | 103.65 |
| 20.4 99 52  14.793103 6.873276 100.500862 | | | | 48.3 | 102.26 |
| 23.0 97 41 | | | | 48.3 | 102.31 |
| 11.666667 6.700000 100.540000  12.1 96 13 | | | | 6.4 | 99.83 |
|  | 24.000000 | 9.700000 | 100.120000 |  |  |
| -1.2 | 78 |  | 28 | 24.1 | 101.11 |

**Drizzle,Ice Pellets,Fog** 0.400000 -0.700000 92.000000

**Cloudy** 2012-12-31 06:00:00 30.5

**Drizzle,Snow** 1.050000 0.150000 93.500000

**Drizzle** 2012-12-22 01:00:00 18.8

**Drizzle,Snow,Fog** 0.693333 0.120000 95.866667

**Drizzle,Fog** 2012-12-19 10:00:00 19.9

**Fog** 4.303333 3.159333 92.286667

**Drizzle,Ice Pellets,Fog** 2012-12-17 09:00:00 0.4

**Freezing Drizzle** -5.657143 -8.000000 83.571429

**Drizzle,Snow** 2012-12-19 18:00:00 1.2

**Freezing Drizzle,Fog** -2.533333 -4.183333 88.500000

**Drizzle,Snow,Fog** 2012-12-22 03:00:00 1.1

**Freezing Drizzle,Haze** -5.433333 -8.000000 82.000000

**Fog** 2012-12-29 10:00:00 20.8

**Freezing Drizzle,Snow** -5.109091 -7.072727 86.090909

**Freezing Drizzle** 2012-12-17 00:00:00 -2.3

**Freezing Fog** -7.575000 -9.250000 87.750000

**Freezing Drizzle,Fog** 2012-12-10 05:00:00 -0.3

**Freezing Rain** -3.885714 -6.078571 84.642857

**Freezing Drizzle,Haze** 2012-02-01 13:00:00 -5.0

**Freezing Rain,Fog** -2.225000 -3.750000 89.500000

**Freezing Drizzle,Snow** 2012-12-28 02:00:00 -3.3

**Freezing Rain,Haze** -4.900000 -7.450000 82.500000

**Freezing Fog** 2012-03-17 06:00:00 -0.1

**Freezing Rain,Ice Pellets,Fog** -2.600000 -3.700000 92.000000

**Freezing Rain** 2012-12-17 02:00:00 0.3

**Freezing Rain,Snow Grains** -5.000000 -7.300000 84.000000

**Freezing Rain,Fog** 2012-12-17 01:00:00 0.1

**Haze** -0.200000 -2.975000 81.625000

**Freezing Rain,Haze** 2012-02-01 15:00:00 -4.9

**Mainly Clear** 12.558927 4.581671 60.667142

**Freezing Rain,Ice Pellets,Fog** 2012-12-17 03:00:00 -2.6

**Moderate Rain,Fog** 1.700000 0.800000 94.000000

**Freezing Rain,Snow Grains** 2012-01-13 09:00:00 -5.0

**Moderate Snow** -5.525000 -7.250000 87.750000

**Haze** 2012-12-13 12:00:00 14.1

**Moderate Snow,Blowing Snow** -5.450000 -6.500000 92.500000

**Mainly Clear** 2012-12-30 22:00:00 33.0

**Mostly Cloudy** 10.574287 3.131174 62.102465

**Moderate Rain,Fog** 2012-12-10 08:00:00 1.7

**Rain** 9.786275 7.042810 83.624183

**Moderate Snow** 2012-12-27 09:00:00 -4.9

**Rain Showers** 13.722340 9.187766 75.159574

**Moderate Snow,Blowing Snow** 2012-12-27 12:00:00 -5.4

**Rain Showers,Fog** 12.800000 12.100000 96.000000

**Mostly Cloudy** 2012-12-31 03:00:00 32.4

**Rain Showers,Snow Showers** 2.150000 -1.500000 76.500000

**Rain** 2012-12-21 21:00:00 22.8

**Rain,Fog** 8.273276 7.219828 93.189655

**Rain Showers** 2012-12-14 11:00:00 26.4

**Rain,Haze** 4.633333 2.066667 83.333333

**Rain Showers,Fog** 2012-10-20 03:00:00 12.8

**Rain,Ice Pellets** 0.600000 -0.600000 92.000000

**Rain Showers,Snow Showers** 2012-12-05 10:00:00 2.2

**Rain,Snow** 1.055556 -0.566667 89.000000 28.388889 11.672222 99.951111

**Rain,Fog** 2012-12-10 17:00:00 21.7 19.5 100 46 9.7 101.77

**Rain,Snow Grains** 1.900000 -2.100000 75.000000 26.000000 25.000000 100.600000

**Rain,Haze** 2012-03-13 09:00:00 5.5 2.9 86 17 9.7 100.61

**Rain,Snow,Fog** 0.800000 0.300000 96.000000 9.000000 6.400000 100.730000

**Rain,Ice Pellets** 2012-12-18 05:00:00 0.6 -0.6 92 24 9.7 100.12

**Rain,Snow,Ice Pellets** 1.100000 -0.175000 91.500000 23.250000 6.000000 100.105000

**Rain,Snow** 2012-12-21 09:00:00 1.7 0.5 94 52 25.0 101.07

**Snow** -4.524103 -7.623333 79.307692 20.038462 11.171795 100.536103

**Rain,Snow Grains** 2012-12-21 00:00:00 1.9 -2.1 75

|  |  |  |
| --- | --- | --- |
| 26  99.700000 | 25.0 | 100.60 |
| 9  100.963500 | 6.4 | 100.73 |
| 28  101.292500 | 6.4 | 100.47 |
| 57  99.704737 | 25.0 | 102.73 |
| 35  100.688649 | 2.4 | 99.70 |
| 37  100.782000 | 48.3 | 102.50 |
| 22  100.548333 | 9.7 | 102.52 |
| 48  100.230000 | 9.7 | 100.62 |
| 35  100.260000 | 9.7 | 102.07 |
| 15  100.010000 | 6.4 | 100.99 |
| 33  100.420000 | 11.3 | 100.96 |
| 15  100.233750 | 25.0 | 100.62 |
| 9 | 2.4 | 100.26 |

**Snow Pellets** 0.700000 -6.400000 59.000000 35.000000 2.400000

**Rain,Snow,Fog** 2012-12-08 21:00:00 0.8 0.3 96

**Snow Showers** -3.506667 -7.866667 72.350000 19.233333 20.158333

**Rain,Snow,Ice Pellets** 2012-12-21 05:00:00 1.3 0.1 94

**Snow Showers,Fog** -10.675000 -11.900000 90.750000 13.750000 7.025000

**Snow** 2012-12-31 23:00:00 3.7 0.3 96

**Snow,Blowing Snow** -5.410526 -7.621053 84.473684 34.842105 4.105263

**Snow Pellets** 2012-11-24 15:00:00 0.7 -6.4 59

**Snow,Fog** -5.075676 -6.364865 90.675676 17.324324 4.537838

**Snow Showers** 2012-12-31 08:00:00 2.9 -0.7 94

**Snow,Haze** -4.020000 -6.860000 80.600000 5.000000 4.640000

**Snow Showers,Fog** 2012-12-29 13:00:00 -10.0 -11.1 92

**Snow,Ice Pellets** -1.883333 -3.666667 87.666667 23.833333 7.416667

**Snow,Blowing Snow** 2012-12-27 19:00:00 -1.4 -2.9 91

**Thunderstorms** 24.150000 19.750000 77.000000 7.500000 24.550000

**Snow,Fog** 2012-12-31 10:00:00 1.1 0.8 99

**Thunderstorms,Heavy Rain Showers** 10.900000 9.000000 88.000000 9.000000 2.400000

**Snow,Haze** 2012-02-01 21:00:00 -3.6 -6.4 81

**Thunderstorms,Moderate Rain Showers,Fog** 19.600000 18.500000 93.000000 15.000000 3.200000

**Snow,Ice Pellets** 2012-12-17 06:00:00 0.8 -1.7 92

**Thunderstorms,Rain** 20.433333 18.533333 89.000000 15.666667 19.833333

**Thunderstorms** 2012-07-16 01:00:00 26.7 20.1 87

**Thunderstorms,Rain Showers** 20.037500 17.618750 86.375000 18.312500 15.893750

**Thunderstorms,Heavy Rain Showers** 2012-05-29 06:00:00 10.9 9.0 88

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Thunderstorms,Rain Showers,Fog** | 21.600000 | 18.700000 | 84.000000 | 19.666667 | | 9.700000 | 100.063333 | | |
| **Thunderstorms,Moderate Rain Showers,Fog** | 2012-07-17 06:00:00 | 19.6 | 18.5 | | 93 | 15 | | 3.2 | 100.01 |
| **Thunderstorms,Rain,Fog** | 20.600000 | 18.600000 | 88.000000 |  | 19.000000 | 4.800000 | 100.080000 |  |  |
| **Thunderstorms,Rain** | 2012-07-23 18:00:00 | 21.3 |  | 19.1 | 93 |  | 30 | 24.1 | 100.83 |
| **Thunderstorms,Rain Showers** | 2012-09-14 20:00:00 | 25.5 |  | 23.1 | 98 |  | 32 | 25.0 | 101.06 |
| **Thunderstorms,Rain Showers,Fog** | 2012-07-31 20:00:00 | 22.9 |  | 21.3 | 91 |  | 35 | 9.7 | 100.64 |
| **Thunderstorms,Rain,Fog** | 2012-07-17 05:00:00 | 20.6 |  | 18.6 | 88 |  | 19 | 4.8 | 100.08 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| df.groupby("Weather").min() |  | | | | | | |
| Out[125]: |  |  |  |  |  |  |  |
| **Weather** | **Date/Time** | **Temp\_C** | **Dew Point Temp\_C** | **Rel Hum\_%** | **Wind Speed\_km/h** | **Visibility\_km** | **Press\_kPa** |
| **Clear** | 2012-01-03 19:00:00 | -23.3 | -28.5 | 20 | 0 | 11.3 | 99.52 |
| **Cloudy** | 2012-01-01 17:00:00 | -21.4 | -26.8 | 18 | 0 | 11.3 | 98.39 |
| **Drizzle** | 2012-01-23 21:00:00 | 1.1 | -0.2 | 74 | 0 | 6.4 | 97.84 |
| **Drizzle,Fog** | 2012-01-23 20:00:00 | 0.0 | -1.6 | 85 | 0 | 1.0 | 98.65 |
| **Drizzle,Ice Pellets,Fog** | 2012-12-17 09:00:00 | 0.4 | -0.7 | 92 | 20 | 4.0 | 100.79 |
| **Drizzle,Snow** | 2012-12-17 15:00:00 | 0.9 | 0.1 | 92 | 9 | 9.7 | 100.63 |
| **Drizzle,Snow,Fog** | 2012-12-18 21:00:00 | 0.3 | -0.1 | 92 | 7 | 2.4 | 97.79 |
| **Fog** | 2012-01-01 00:00:00 | -16.0 | -17.2 | 80 | 0 | 0.2 | 98.31 |
| **Freezing Drizzle** | 2012-01-07 11:00:00 | -9.0 | -12.2 | 78 | 6 | 4.8 | 98.44 |
| **Freezing Drizzle,Fog** | 2012-01-01 02:00:00 | -6.4 | -9.0 | 82 | 6 | 3.6 | 98.74 |
| **Freezing Drizzle,Haze** | 2012-02-01 11:00:00 | -5.8 | -8.3 | 81 | 9 | 2.0 | 100.28 |
| **Freezing Drizzle,Snow** | 2012-01-13 03:00:00 | -8.3 | -10.4 | 79 | 6 | 2.4 | 99.19 |
| **Freezing Fog** | 2012-01-22 06:00:00 | -19.0 | -22.9 | 71 | 0 | 0.2 | 101.97 |
| **Freezing Rain** | 2012-01-07 10:00:00 | -6.5 | -9.0 | 81 | 7 | 2.8 | 98.22 |
| **Freezing Rain,Fog** | 2012-01-07 09:00:00 | -6.1 | -8.7 | 82 | 7 | 2.8 | 98.32 |
| **Freezing Rain,Haze** | 2012-02-01 14:00:00 | -4.9 | -7.5 | 82 | 6 | 2.0 | 100.34 |
| **Freezing Rain,Ice Pellets,Fog** | 2012-12-17 03:00:00 | -2.6 | -3.7 | 92 | 28 | 8.0 | 100.95 |
| **Freezing Rain,Snow Grains** | 2012-01-13 09:00:00 | -5.0 | -7.3 | 84 | 32 | 4.8 | 98.56 |
| **Haze** | 2012-01-22 12:00:00 | -11.5 | -16.0 | 68 | 0 | 4.8 | 100.35 |
| **Mainly Clear** | 2012-01-02 12:00:00 | -22.8 | -28.0 | 20 | 0 | 12.9 | 98.67 |
| **Moderate Rain,Fog** | 2012-12-10 08:00:00 | 1.7 | 0.8 | 94 | 17 | 6.4 | 99.98 |
| **Moderate Snow** | 2012-01-12 15:00:00 | -6.3 | -7.6 | 83 | 26 | 0.6 | 99.88 |
| **Moderate Snow,Blowing Snow** | 2012-12-27 10:00:00 | -5.5 | -6.6 | 92 | 39 | 0.6 | 100.50 |
| **Mostly Cloudy** | 2012-01-01 16:00:00 | -23.2 | -28.5 | 18 | 0 | 11.3 | 98.36 |
| **Rain** | 2012-01-01 18:00:00 | 0.3 | -5.7 | 40 | 0 | 4.0 | 97.52 |
| **Rain Showers** | 2012-01-01 22:00:00 | 1.6 | -7.2 | 37 | 0 | 6.4 | 98.51 |
| **Rain Showers,Fog** | 2012-10-20 03:00:00 | 12.8 | 12.1 | 96 | 13 | 6.4 | 99.83 |
| **Rain Showers,Snow Showers** | 2012-11-04 08:00:00 | 2.1 | -1.8 | 75 | 17 | 19.3 | 101.09 |
| **Rain,Fog** | 2012-01-23 18:00:00 | 0.0 | -1.2 | 83 | 0 | 2.0 | 98.61 |
| **Rain,Haze** | 2012-03-13 07:00:00 | 4.0 | 1.0 | 81 | 7 | 4.0 | 100.50 |
| **Rain,Ice Pellets** | 2012-12-18 05:00:00 | 0.6 | -0.6 | 92 | 24 | 9.7 | 100.12 |
| **Rain,Snow** | 2012-01-10 05:00:00 | 0.6 | -1.7 | 81 | 13 | 2.4 | 98.18 |
| **Rain,Snow Grains** | 2012-12-21 00:00:00 | 1.9 | -2.1 | 75 | 26 | 25.0 | 100.60 |
| **Rain,Snow,Fog** | 2012-12-08 21:00:00 | 0.8 | 0.3 | 96 | 9 | 6.4 | 100.73 |
| **Rain,Snow,Ice Pellets** | 2012-12-21 01:00:00 | 0.9 | -0.7 | 88 | 17 | 4.8 | 99.85 |
| **Snow** | 2012-01-03 07:00:00 | -16.7 | -24.6 | 41 | 0 | 1.0 | 97.75 |
| **Snow Pellets** | 2012-11-24 15:00:00 | 0.7 | -6.4 | 59 | 35 | 2.4 | 99.70 |
| **Snow Showers** | 2012-01-02 17:00:00 | -13.3 | -19.3 | 52 | 0 | 2.4 | 99.49 |
| **Snow Showers,Fog** | 2012-12-26 09:00:00 | -11.3 | -12.7 | 89 | 7 | 4.0 | 100.63 |
| **Snow,Blowing Snow** | 2012-01-13 21:00:00 | -12.0 | -16.2 | 70 | 24 | 0.6 | 98.11 |
| **Snow,Fog** | 2012-02-10 23:00:00 | -10.1 | -12.0 | 77 | 4 | 1.2 | 99.38 |
| **Snow,Haze** | 2012-02-01 17:00:00 | -4.3 | -7.2 | 80 | 0 | 4.0 | 100.61 |
| **Snow,Ice Pellets** | 2012-03-03 04:00:00 | -4.3 | -5.9 | 76 | 19 | 2.8 | 99.40 |
| **Thunderstorms** | 2012-07-04 16:00:00 | 21.6 | 19.4 | 67 | 0 | 24.1 | 99.84 |
| **Thunderstorms,Heavy Rain Showers** | 2012-05-29 06:00:00 | 10.9 | 9.0 | 88 | 9 | 2.4 | 100.26 |
| **Thunderstorms,Moderate Rain Showers,Fog** | 2012-07-17 06:00:00 | 19.6 | 18.5 | 93 | 15 | 3.2 | 100.01 |
| **Thunderstorms,Rain** | 2012-05-25 20:00:00 | 19.4 | 18.2 | 83 | 4 | 16.1 | 100.19 |
| **Thunderstorms,Rain Showers** | 2012-05-29 04:00:00 | 11.0 | 7.0 | 68 | 7 | 6.4 | 99.65 |
| **Thunderstorms,Rain Showers,Fog** | 2012-06-29 03:00:00 | 19.5 | 16.1 | 80 | 7 | 9.7 | 99.71 |
| **Thunderstorms,Rain,Fog** | 2012-07-17 05:00:00 | 20.6 | 18.6 | 88 | 19 | 4.8 | 100.08 |

In [127]:

*#Show all condition where weather is fog*

df[df["Weather"]**==**"Fog"]

Out[127]:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Date/Time** | **Temp\_C** | **Dew Point Temp\_C** | **Rel Hum\_%** | **Wind Speed\_km/h** | **Visibility\_km** | **Press\_kPa** | **Weather** |
| **0** | 2012-01-01 00:00:00 | -1.8 | -3.9 | 86 | 4 | 8.0 | 101.24 | Fog |
| **1** | 2012-01-01 01:00:00 | -1.8 | -3.7 | 87 | 4 | 8.0 | 101.24 | Fog |
| **4** | 2012-01-01 04:00:00 | -1.5 | -3.3 | 88 | 7 | 4.8 | 101.23 | Fog |
| **5** | 2012-01-01 05:00:00 | -1.4 | -3.3 | 87 | 9 | 6.4 | 101.27 | Fog |
| **6** | 2012-01-01 06:00:00 | -1.5 | -3.1 | 89 | 7 | 6.4 | 101.29 | Fog |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... |
| **8716** | 2012-12-29 04:00:00 | -16.0 | -17.2 | 90 | 6 | 9.7 | 101.25 | Fog |
| **8717** | 2012-12-29 05:00:00 | -14.8 | -15.9 | 91 | 4 | 6.4 | 101.25 | Fog |
| **8718** | 2012-12-29 06:00:00 | -13.8 | -15.3 | 88 | 4 | 9.7 | 101.25 | Fog |
| **8719** | 2012-12-29 07:00:00 | -14.8 | -16.4 | 88 | 7 | 8.0 | 101.22 | Fog |
| **8722** | 2012-12-29 10:00:00 | -12.0 | -13.3 | 90 | 7 | 6.4 | 101.15 | Fog |

150 rows × 8 columns

In [128]:

*#Find the all instance where weather is clear or visbilty is above 40*

df[(df["Weather"]**==**"Clear")**|**(df["Visibility\_km"]**>**40)]

Out[128]:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Date/Time** | **Temp\_C** | **Dew Point Temp\_C** | **Rel Hum\_%** | **Wind Speed\_km/h** | **Visibility\_km** | **Press\_kPa** | **Weather** |
| **67** | 2012-01-03 19:00:00 | -16.9 | -24.8 | 50 | 24 | 25.0 | 101.74 | Clear |
| **106** | 2012-01-05 10:00:00 | -6.0 | -10.0 | 73 | 17 | 48.3 | 100.45 | Mainly Clear |
| **107** | 2012-01-05 11:00:00 | -5.6 | -10.2 | 70 | 22 | 48.3 | 100.41 | Mainly Clear |
| **108** | 2012-01-05 12:00:00 | -4.7 | -9.6 | 69 | 20 | 48.3 | 100.38 | Mainly Clear |
| **109** | 2012-01-05 13:00:00 | -4.4 | -9.7 | 66 | 26 | 48.3 | 100.40 | Mainly Clear |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... |
| **8749** | 2012-12-30 13:00:00 | -12.4 | -16.2 | 73 | 37 | 48.3 | 100.92 | Mostly Cloudy |
| **8750** | 2012-12-30 14:00:00 | -11.8 | -16.1 | 70 | 37 | 48.3 | 100.96 | Mainly Clear |
| **8751** | 2012-12-30 15:00:00 | -11.3 | -15.6 | 70 | 32 | 48.3 | 101.05 | Mainly Clear |
| **8752** | 2012-12-30 16:00:00 | -11.4 | -15.5 | 72 | 26 | 48.3 | 101.15 | Mainly Clear |
| **8756** | 2012-12-30 20:00:00 | -13.8 | -16.5 | 80 | 24 | 25.0 | 101.52 | Clear |

3027 rows × 8 columns

In [129]:

*#Find all instance where*

*#Weather is clear and humdity is above 50 or #visbilty is above 40*

df[((df["Weather"]**==**"Clear") **&** df["Rel Hum\_%"]**>**50)**|**(df["Visibility\_km"]**>**40)]

Out[129]:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Date/Time** | **Temp\_C** | **Dew Point Temp\_C** | **Rel Hum\_%** | **Wind Speed\_km/h** | **Visibility\_km** | **Press\_kPa** | **Weather** |
| **106** | 2012-01-05 10:00:00 | -6.0 | -10.0 | 73 | 17 | 48.3 | 100.45 | Mainly Clear |
| **107** | 2012-01-05 11:00:00 | -5.6 | -10.2 | 70 | 22 | 48.3 | 100.41 | Mainly Clear |
| **108** | 2012-01-05 12:00:00 | -4.7 | -9.6 | 69 | 20 | 48.3 | 100.38 | Mainly Clear |
| **109** | 2012-01-05 13:00:00 | -4.4 | -9.7 | 66 | 26 | 48.3 | 100.40 | Mainly Clear |
| **110** | 2012-01-05 14:00:00 | -5.1 | -10.7 | 65 | 22 | 48.3 | 100.46 | Mainly Clear |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... |
| **8748** | 2012-12-30 12:00:00 | -12.2 | -15.7 | 75 | 26 | 48.3 | 100.91 | Mostly Cloudy |
| **8749** | 2012-12-30 13:00:00 | -12.4 | -16.2 | 73 | 37 | 48.3 | 100.92 | Mostly Cloudy |
| **8750** | 2012-12-30 14:00:00 | -11.8 | -16.1 | 70 | 37 | 48.3 | 100.96 | Mainly Clear |
| **8751** | 2012-12-30 15:00:00 | -11.3 | -15.6 | 70 | 32 | 48.3 | 101.05 | Mainly Clear |
| **8752** | 2012-12-30 16:00:00 | -11.4 | -15.5 | 72 | 26 | 48.3 | 101.15 | Mainly Clear |

2014 rows × 8 columns

In [ ]: