The weather dataset was created using the [history feature of Wunderground’s API](https://www.wunderground.com/weather/api/d/docs?d=data/history&MR=1). For each of the 11 cities (10 largest cities in the world as of 2017 and Pittsburgh), we requested the weather data for every day in 2017. This resulted in descriptions of the weather condition (string) for every 30 minute segment of the day (48 per day). We used that to determine the overall condition for that day, and stored that in a list of size 365 per city.

Wunderground has 50 different possible weather conditions. We simplify these weather conditions into 4 -- Sunny, Cloudy, Rain, and Snow -- in the following way.

**Sunny: 0**

"Clear": "29",

**Cloudy: 1**

"Mostly Cloudy": "3",

"Scattered Clouds": "15",

"Overcast": "30",

"Funnel Cloud": "41",

"Light Fog": "42",

"Light Sandstorm": "43",

"Partly Cloudy": "35",

"Patches of Fog": "24",

"Partial Fog": "27",

"Blowing Sand": "31",

"Sand": "34",

"Smoke": "36",

"Shallow Fog": "37",

"Volcanic Ash": "38",

"Haze": "8",

"Fog": "9",

"Dust Whirls": "10",

"Heavy Haze": "2",

"Widespread Dust": "13",

"Heavy Fog": "14",

**Rain: 2**

"Light Drizzle": "1",

"Heavy Rain Showers": "7",

"Rain": "20",

"Drizzle": "49",

"Light Rain": "18",

"Heavy Rain": "44",

"Rain Showers": "26",

"Light Rain Showers": "28",

"Mist": "47",

"Light Thunderstorm": "4",

"Thunderstorm": "19",

"Light Thunderstorms and Rain": "23",

"Heavy Thunderstorms and Rain": "32",

"Thunderstorms and Rain": "39",

**Snow: 3**

"Snow": "6",

"Heavy Snow": "11",

"Light Snow Grains": "16",

"Light Small Hail Showers": "22",

"Light Snow Showers": "45",

"Snow Showers": "25",

"Light Snow": "12",

"Blowing Snow": "33",

"Light Ice Pellets": "46",

"Light Freezing Drizzle": "48",

"Light Freezing Rain": "17",

"Light Freezing Fog": "21",

"Thunderstorms with Hail": "40",

**Ignore:**

"": "0",

"Unknown": "5",