Description of the Image2Weather dataset

1. Introduction

The Image2Weather dataset consists of 183,798 images in total. The numbers of images in different weather conditions are listed as follows. Note that the distribution of the numbers of images in different weather conditions is different from the one we wrote in our paper (mentioned below), because we further manually correct weather types and label images with unclear weather conditions into "others".

Number of sunny images	70,501
Number of cloudy images	45,662
Number of snowy images	1,252
Number of rainy images	1,369
Number of foggy images	357
Number of other images	64,657
Total	**183,798**

2. File description

- Image.zip (6 GB): Original image files. There are 183,798 JPEG files in total.
- metadata.json (113 MB): Metadata of these 183,798 images.

The metadata for each photo is as follows:

▲ ▣ (1) ObjectId("5273235ef9664e...	{ 4 fields }	Object
▦ id	2384920722	String
▦ elevation	38.049236297607	String
▲ ▣ loc	{ 2 fields }	Object
▦ lat	41.892997	Double
▦ lng	12.482507	Double
▲ ▣ weather	{ 15 fields }	Object
▦ windchillm	-999	String
▦ windchilli	-999	String
▦ pressurei	30.12	String
▦ pressurem	1020	String
▦ hum	54	String
▦ tempi	82.4	String
▦ tempm	28.0	String
▦ dewptm	18.0	String
▦ dewpti	64.4	String
▲ ▣ date	{ 7 fields }	Object
▦ mday	16	String
▦ hour	16	String
▦ min	50	String
▦ mon	09	String
▦ pretty	4:50 PM CEST on September 16, 2007	String
▦ year	2007	String
▦ tzname	Europe/Rome	String
▦ visi	6.2	String
▦ vism	10.0	String
▲ ▣ utcdate	{ 7 fields }	Object
▦ mday	16	String
▦ hour	14	String
▦ min	50	String
▦ mon	09	String
▦ pretty	2:50 PM GMT on September 16, 2007	String
▦ year	2007	String
▦ tzname	UTC	String
▦ wgusti	-9999.0	String
▦ wgustm	-9999.0	String

Meaning of metadata

Property names	Meaning
elevation	elevation
loc	Latitude and longitude
type	Weather types: clear (sunny), cloudy, snowy, rainy, foggy
date	Local time of the weather record
utcdate	Coordinated universal time
hum	Humidity
tempm	Temperature in terms of Centigrade
tempi	Temperature in terms of Fahrenheit
dewptm	Dew point temperature in terms of centigrade
dewpti	Dew point temperature in terms of Fahrenheit
vism	Visibility in km
visi	Visibility in miles
pressurem	Pressure in mBar
pressurei	Pressure in inHg
windchillm	Wind chill in terms of Centigrade
windchilli	Wind chill in terms of Fahrenheit
wgustm	Wind gust kph
wgusti	Wind gust mph