

Project Title: Weather events in Starbucks location in US

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Project Description/Outline

Our team is trying to determine the weather events that occurred in various Starbucks locations in the US between 2016 and 2019. This is based on the datasets for Weather events between 2016 and 2019 and the various Starbucks location in the world.

Data sets to be used

1. <https://www.kaggle.com/sobhanmoosavi/us-weather-events> (Kaggle)
2. <https://github.com/mmcloughlin/starbucks/blob/master/locations.json> (All starbucks locations in the world)

The field of interest for the Weather data set event id, Type , severity, start time(UTC), End time (UTC), latitude, longitude, City , State and Zip code.

The field of interest for the Starbucks locations are City, Name, Country, longitude and latitude

EventId	Type	Severity	StartTime(UTC)	EndTime(UTC)	Timezone	AirportCode	LocationLat	LocationLong	City	County	State	ZipCode
1	W-1	Snow	1/6/16 23:54	1/7/16 0:34 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	
2	W-2	Snow	1/7/16 4:54	1/7/16 5:54 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	
3	W-3	Snow	1/7/16 5:54	1/7/16 13:34 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"city": "Hong Kong",
4	W-4	Snow	1/7/16 5:54	1/7/16 15:54 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"name": "Tsim Sha Tsui",
5	W-5	Snow	1/7/16 15:54	1/7/16 17:34 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"country": "CN",
6	W-6	Snow	1/7/16 18:14	1/7/16 19:14 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"longitude": 114.108348,
7	W-7	Fog	1/7/16 15:54	1/7/16 15:54 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"latitude": 22.296608,
8	W-8	Fog	1/7/16 15:54	1/7/16 16:14 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"store_id": 1 }
9	W-9	Fog	1/7/16 16:14	1/7/16 16:34 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	
10	W-10	Fog	1/7/16 16:34	1/7/16 16:54 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"city": "Hong Kong",
11	W-11	Cold	1/7/16 16:54	1/7/16 20:34 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"name": "Exchange Square",
12	W-12	Fog	1/7/16 2:54	1/7/16 4:14 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"country": "CN",
13	W-13	Fog	1/7/16 9:34	1/7/16 10:14 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"longitude": 114.158178,
14	W-14	Snow	1/7/16 10:14	1/7/16 10:34 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"latitude": 22.283939,
15	W-15	Fog	1/7/16 10:34	1/7/16 10:54 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"store_id": 2 }
16	W-16	Fog	1/7/16 11:14	1/7/16 13:14 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	
17	W-17	Cold	1/7/16 13:14	1/7/16 21:34 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"city": "Hong Kong",
18	W-18	Cold	1/11/16 12:14	1/11/16 12:54 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"name": "The Landmark",
19	W-19	Snow	1/7/16 9:54	1/7/16 9:54 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"country": "CN",
20	W-20	Snow	1/7/16 10:34	1/7/16 11:14 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"longitude": 114.158178,
21	W-21	Snow	1/7/16 13:34	1/7/16 14:14 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"latitude": 22.283939,
22	W-22	Snow	1/7/16 15:54	1/7/16 16:14 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"store_id": 3 }
23	W-23	Snow	1/7/16 7:55	1/7/16 8:15 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	
24	W-24	Snow	1/7/16 8:35	1/7/16 10:15 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"city": "Hong Kong",
25	W-25	Snow	1/7/16 11:55	1/7/16 12:55 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"name": "The Landmark",
26	W-26	Snow	1/7/16 13:55	1/7/16 14:15 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"country": "CN",
27	W-27	Snow	1/7/16 14:55	1/7/16 15:15 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"longitude": 114.158178,
28	W-28	Snow	1/7/16 15:55	1/7/16 16:15 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"latitude": 22.283939,
29	W-29	Snow	1/7/16 22:34	1/7/16 22:55 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"store_id": 4 }
30	W-30	Snow	1/7/16 2:55	1/7/16 2:55 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	
31	W-31	Snow	1/24/16 20:35	1/24/16 21:35 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"city": "Hong Kong",
32	W-32	Snow	1/7/16 7:55	1/7/16 8:35 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"name": "Pacific Place, Central",
33	W-33	Snow	1/7/16 8:55	1/7/16 9:55 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"country": "CN",
34	W-34	Snow	1/7/16 10:15	1/7/16 10:35 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"longitude": 114.164136,
35	W-35	Snow	1/7/16 11:15	1/7/16 11:35 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"latitude": 22.296608,
36	W-36	Snow	1/7/16 12:15	1/7/16 12:55 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"store_id": 5 }
37	W-37	Snow	1/7/16 13:55	1/7/16 15:15 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	
38	W-38	Fog	1/7/16 15:15	1/7/16 16:15 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"city": "Hong Kong",
39	W-39	Snow	1/7/16 16:15	1/7/16 18:15 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"name": "The Landmark",
40	W-40	Snow	2/7/16 2:55	2/7/16 2:55 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"country": "CN",
41	W-41	Snow	2/7/16 3:55	2/7/16 3:55 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"longitude": 114.158178,
42	W-42	Snow	2/7/16 4:55	2/7/16 5:15 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"latitude": 22.283939,
43	W-43	Snow	2/7/16 5:15	2/7/16 7:55 US/Mountain	KORV	38.0972	-106.1689	Saguache	Saguache	CO	81240	"store_id": 6 }

US_WeatherEvents_2016-2019

Extract : The weather data is a CSV file and the Starbucks data is a json file.

Transform : In order to transform the public data and use it in our study we performed the following:

- Used Pandas functions in Jupyter Notebook to load all the CSV file and the json file
- Reviewed the files and transformed into data frames
- Removed the county column from Weather event dataset as it is not relevant to the focus of this study.
- Removed the store id column from the Starbucks data set
- Joined the two data sets by City (inner)
- Created queries to address our question

Load : The last step was to transfer our final output into a Database. We created a database and respective table to match the columns from the final Panda's Data Frame using Postgres database (PG admin) to store our original clean data sets. We reconnected to the database and generated additional tables for the data frames.

There are some limitations to our findings due to the data available. However, we were able to address our hypothesis question in our initial project proposal listed in the ETL Project Final Technical Report