Choosing a hotel in Times Square

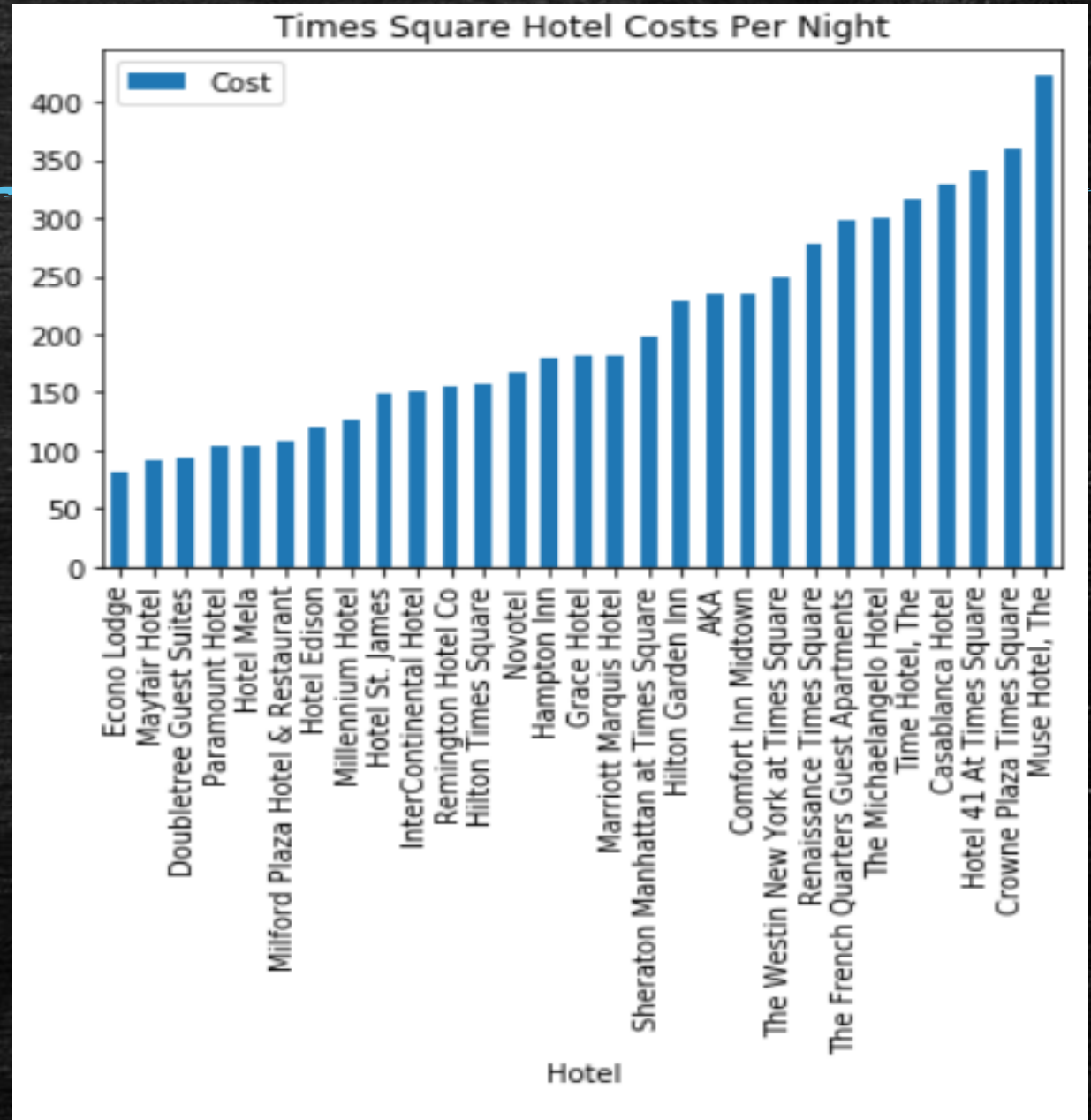# Showing different hotels with their costs and venues is valuable for tourists.

- People are constantly travelling, and most likely stay in hotels when doing so. This is especially the case for tourists vacationing in a foreign country.

- Analyzing hotel cost and nearby venues will help tourists save on gas when going to these locations from the hotel, without needing to needlessly waste money.

- Hotel executives in Times Square can make use of the information gathered from all the hotels to further understand their competition.

Data cleaning and scraping

- List of hotels with their latitude and longitude from Kaggle dataset scraped from http://kaggle.com/new-york-city/ny-times-square-hotels?select=times-square-hotels.csv

- List of venues with their latitude and longitude using Foursquare API

- Original hotel dataset had 41 rows and 10 features

- Hotels that were unable to be found on Tripadvisor, or didn't have a cost allocated to it were dropped
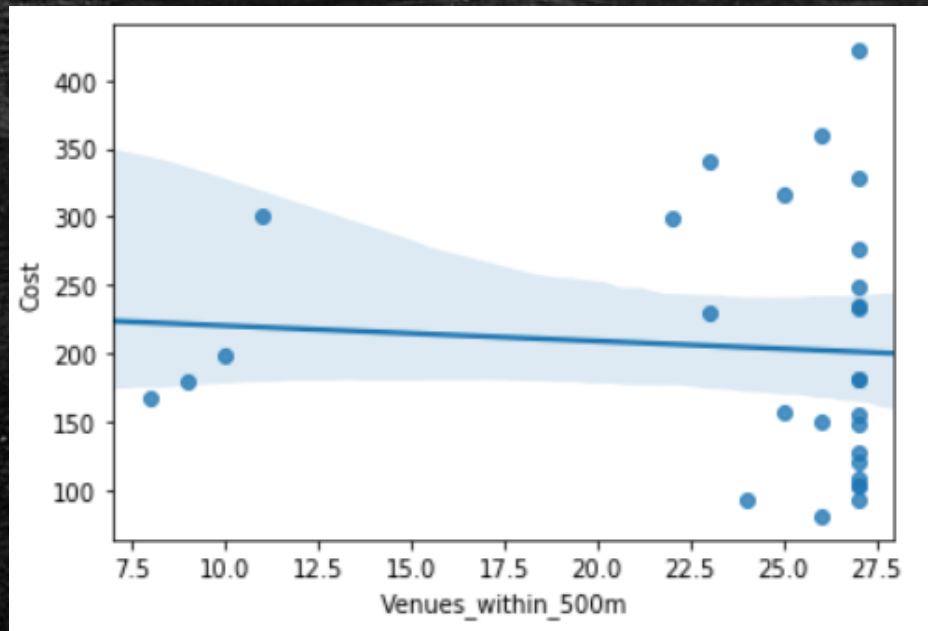
- Final hotel dataframe had 29 and 4 features

Cost of each hotel

- Econo Lodge is the cheapest hotel

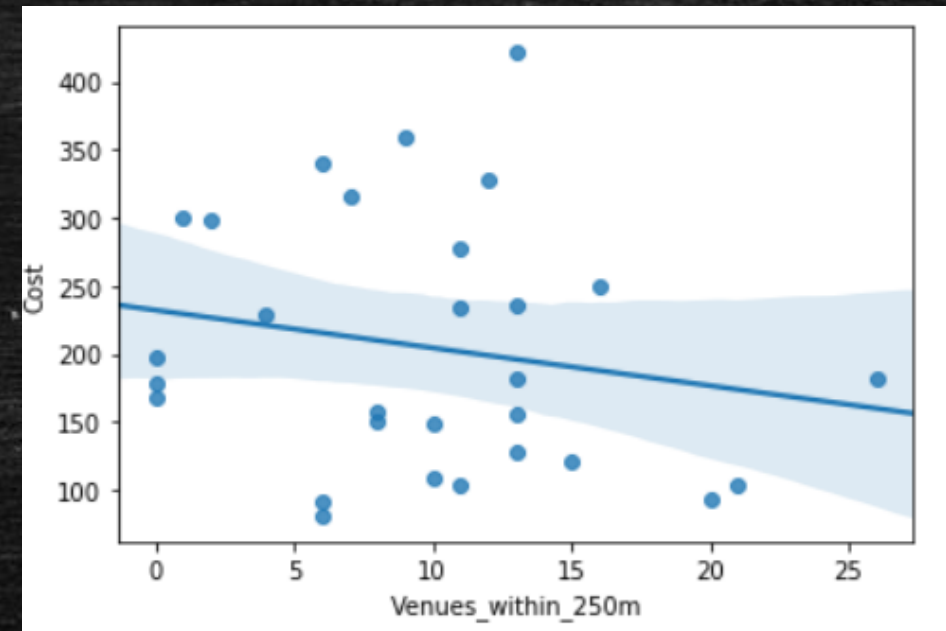- The Muse Hotel is the most expensive

Hotel cost and nearby venues have no significant correlation to each other

Cost and Closer Venues (<250m)

Cost and Close Venues (<500m)

Best hotels for tourists

- Doubletree Guest Suites
- Paramount Hotel

	Hotel	Latitude	Longitude	Cost	Venues_within_500m	Venues_within_250m
0	Paramount Hotel	40.759132	-73.986348	104	27	21
2	Millennium Hotel	40.756667	-73.984396	127	27	13
4	Novotel	40.762897	-73.983683	168	8	0
7	Doubletree Guest Suites	40.759055	-73.984710	93	27	20
9	Hotel 41 At Times Square	40.755597	-73.987999	340	23	6
10	Time Hotel, The	40.761014	-73.985052	316	25	7
11	Hilton Times Square	40.756747	-73.988659	157	25	8
12	The Westin New York at Times Square	40.757482	-73.988309	249	27	16
13	Crowne Plaza Times Square	40.760537	-73.984644	359	26	9
14	Renaissance Times Square	40.759581	-73.984366	277	27	11
16	Casablanca Hotel	40.756022	-73.984808	328	27	12
17	The French Quarters Guest Apartments	40.760359	-73.989286	299	22	2
18	Hotel St. James	40.757026	-73.983291	148	27	10
20	Hotel Mela	40.756461	-73.983952	104	27	11
21	AKA	40.756491	-73.983977	234	27	11
22	Grace Hotel	40.757163	-73.983613	181	27	13
23	Comfort Inn Midtown	40.757811	-73.983230	235	27	13
25	Muse Hotel, The	40.757814	-73.983280	423	27	13
28	Econo Lodge	40.760315	-73.987554	81	26	6
29	Hilton Garden Inn	40.761127	-73.986940	229	23	4

Conclusion and future directions

- Built useful models to show the lack of correlation between hotel cost and nearby attractions and which hotels are good candidates for tourists when basing the decision of cost and what's in the area

- More variables can be used in the regression models

- Possibly expand to a psychological study on why people stay in hotels and which of their features are most important