Introduction/Business Problem

A group of investors would like to invest in the US in the city of Las Vegas, Nevada, specifically on the Las Vegas Strip. They are looking to do business in this major world entertainment metropolis and would like to know what type of business to invest their money in, and that business has little or no competition to help them recoup their investment in a relatively short time.

Stating and refining the Question

To successfully develop this case study, it is necessary to delve into the business problem posed, and define some questions that allow obtaining a more precise and exact understanding of what is wanted with respect to the type of business, investment and competition, these questions would be:

- Do you have any type of business in mind that you want to invest in?
- The investment will be towards a small, medium or large enterprise,
- Do you have in mind to invest in an innovative business or will it be a venture that will compete with those established on the Las Vegas Strip?
- What specific location on the Las Vegas Strip do you want to invest in?

These questions will help stakeholders (investors) to specify a more specific question about their business problem that allows the data scientist to make a good analytical approach. After feedback from stakeholders, the business problem was reformulated as follows:

“Invest in businesses that are not hotels, amusement parks or entertainment, that is, small or medium enterprises such as groceries, shops, stores, cafes, retails, among others, that are located near the most important hotels on the Las Vegas Strip. Depending on how it is targeted and localized competition in areas of interest to invest, entrepreneurship could be an innovative business or a business that can compete with existing ones”.

Based on this new approach, the question of interest for the case study was established:

What are the types of businesses that are located near the major hotels on the Las Vegas Strip (other than amusement parks, entertainment, other hotels, or large businesses) and how are these businesses distributed or grouped in these areas?

Analytic Approach

Once the business problem has been clearly established, now let us define our analytical approach to solve the business problem, according to the question asked was determined that the analysis will be exploratory.

1. For the point of identifying the businesses near the most important hotels on the Las Vegas Strip we will use descriptive statistics in order to describe, characterize and summarize the data set through tables and graphs that allow us to find patterns or references.

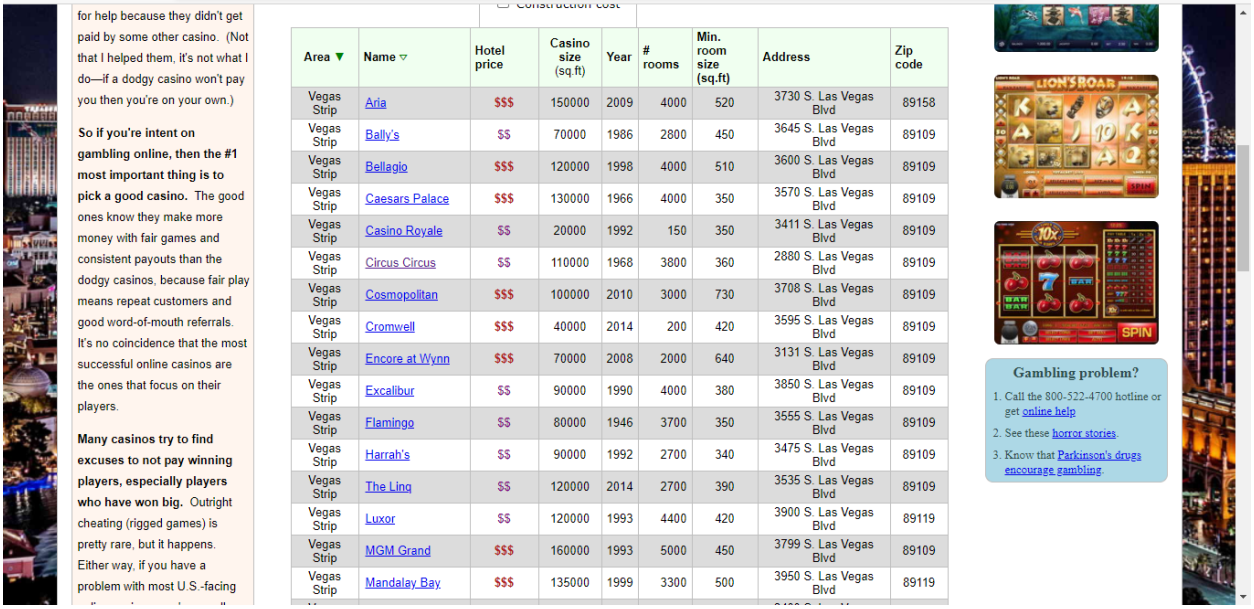
2. For the point referred to how these businesses are distributed or grouped in the areas of interest, we will use the unsupervised learning machine learning technique (K-means) that allows us to identify groups or clusters of interest for investors that allows them to identify where direct your investment.

Data Requirements

Based on the analytical approach established in the previous point, the following data (numerical and categorical) and data sources are needed for the study:

1. Records of the main hotels located on the Las Vegas Strip, can be a web page, database, XLS and CSV files or another file that contains at least the following information: Hotel name, address, location or zip code.

   After an internet search, the website https://easy.vegas/casinos/list-interactive was identified as a data source that contains the information on the main hotels on the Strip and the minimum data necessary for the analysis (below an example of the data).



for help because they didn't get paid by some other casino. (Not that I helped them, it's not what I do—if a dodgy casino won't pay you then you're on your own.)

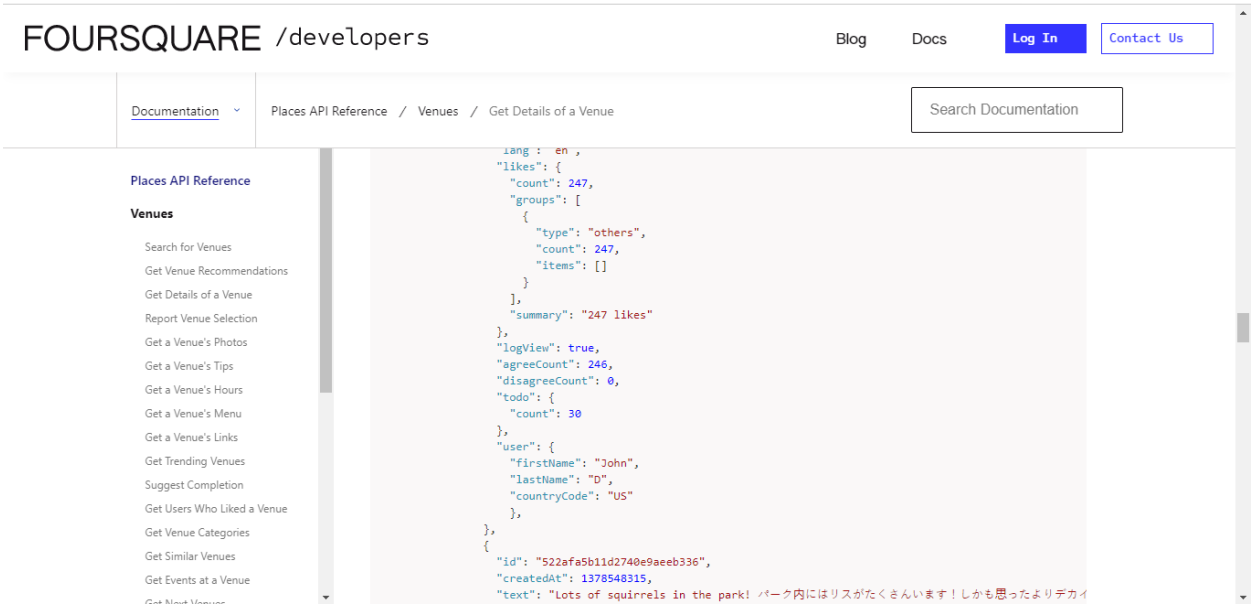
So if you're intent on gambling online, then the #1 most important thing is to pick a good casino. The good ones know they make more money with fair games and consistent payouts than the dodgy casinos, because fair play means repeat customers and good word-of-mouth referrals. It's no coincidence that the most successful online casinos are the ones that focus on their players.

Many casinos try to find excuses to not pay winning players, especially players who have won big. Outright cheating (rigged games) is pretty rare, but it happens. Either way, if you have a problem with most U.S.-facing

Area	Name	Hotel price	Casino size (sq.ft)	Year	# rooms	Min. room size (sq.ft)	Address	Zip code
Vegas Strip	Aria	$$$	150000	2009	4000	520	3730 S. Las Vegas Blvd	89158
Vegas Strip	Bally's	$$	70000	1986	2800	450	3645 S. Las Vegas Blvd	89109
Vegas Strip	Bellagio	$$$	120000	1998	4000	510	3600 S. Las Vegas Blvd	89109
Vegas Strip	Caesars Palace	$$$	130000	1966	4000	350	3570 S. Las Vegas Blvd	89109
Vegas Strip	Casino Royale	$$	20000	1992	150	350	3411 S. Las Vegas Blvd	89109
Vegas Strip	Circus Circus	$$	110000	1968	3800	360	2880 S. Las Vegas Blvd	89109
Vegas Strip	Cosmopolitan	$$$	100000	2010	3000	730	3708 S. Las Vegas Blvd	89109
Vegas Strip	Cromwell	$$$	40000	2014	200	420	3595 S. Las Vegas Blvd	89109
Vegas Strip	Encore at Wynn	$$$	70000	2008	2000	640	3131 S. Las Vegas Blvd	89109
Vegas Strip	Excalibur	$$	90000	1990	4000	380	3850 S. Las Vegas Blvd	89109
Vegas Strip	Flamingo	$$	80000	1946	3700	350	3555 S. Las Vegas Blvd	89109
Vegas Strip	Harrah's	$$	90000	1992	2700	340	3475 S. Las Vegas Blvd	89109
Vegas Strip	The Linq	$$	120000	2014	2700	390	3535 S. Las Vegas Blvd	89109
Vegas Strip	Luxor	$$	120000	1993	4400	420	3900 S. Las Vegas Blvd	89119
Vegas Strip	MGM Grand	$$$	160000	1993	5000	450	3799 S. Las Vegas Blvd	89109
Vegas Strip	Mandalay Bay	$$$	135000	1999	3300	500	3950 S. Las Vegas Blvd	89119

2. Records of businesses located on the Las Vegas Strip, can be a web page, database, XLS and CSV files or other file that contains at least the following information: Business name, address, location or zip code, type or business class.

   To obtain the data of the businesses near the main hotels on the Strip we will use the location platform based on social networks Foursquare through its API to obtain a JSON file (below an example of the data). It contains important characteristics for the study (likes, dislikes, checkin, total users who have ever checked in here, among others).



Data Collection

Since the data obtained through the website https://easy.vegas/casinos/list-interactive to identify the main hotels in the Las Vegas Srtip is very small (~ 30 lines), it will be converted to an Excel table (will be our data set).

For the collection of businesses near the hotels on the Las Vegas Strip, the data will be obtained from the Foursquare platform through API in Python to explore and obtain details of the businesses for the analysis of groups or clusters.