

## Xtern2022 - Data Science

This is my repository for the Xtern 2022 Data Science assessment.

The goal of the assessment is to find the best coworking space for the participants. We were asked to look at what space would have the best restaurants and events close by. All the code that I used to solve this task is in the Xtern 2022 Jupyter Notebook (**Xtern 2022.ipynb**). All the data frames used are also saved as CSV files.

Here I will demonstrate my findings:

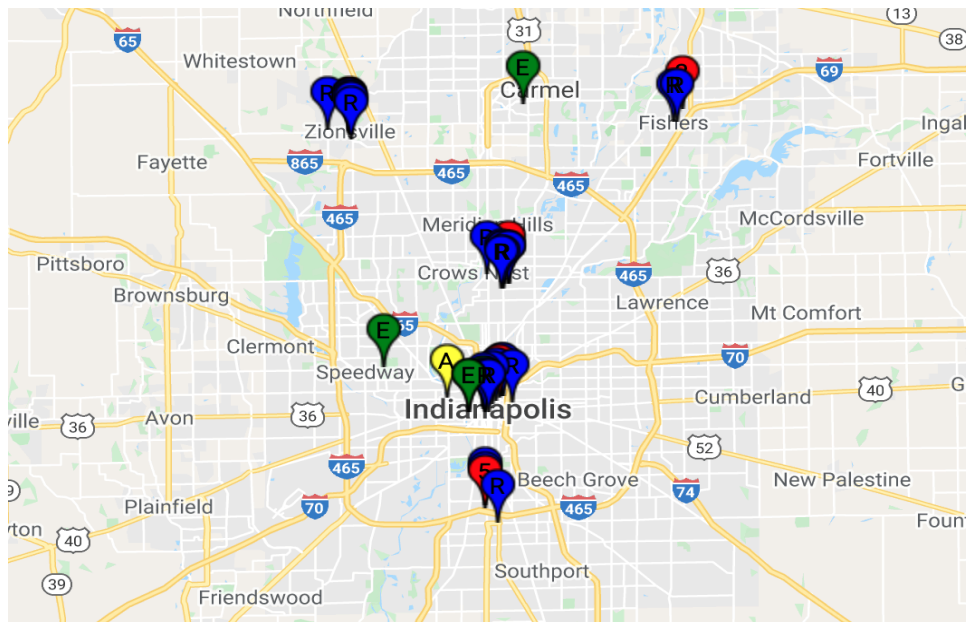
### Restaurants

We were given 6 locations, one is the living space for participants, and the other 5 are coworking spaces.

Using Google Maps API's NearBySearch I found 10 restaurants within a 1500 meter radius of each coworking location.

I filtered the restaurants based on ratings and if they are still in business and around 20 restaurants with the best ratings.

Then, I used the google maps library to represent the restaurants and coworking spaces on a map. To take a better look at the map, please open the **map.html** file. Here is a screenshot of the map file:



The numbered red marks are the coworking spaces on the map, and the R blue marks are the restaurants.

## Events

To find closeby events, I tried using the EventBrite API, however the API that enables search by location and by category is deprecated. (Link to the API website). Because of this issue I had to find another way to find events around Indy. To do so I decided to scrape some information from [VisitIndy.com](http://VisitIndy.com). Using this method I found some events between June and August 2022 which is the timeframe Xtern usually happens.

## Calendar

From the data gathered regarding the restaurants and events, I made a weekly schedule for the 10 week period. Since there wasn't too much data on the events happening in the timeframe I wanted I made the optimal schedule with the data I had.

Here is the calendar -- the event type indicates if it is a weekly meal or an bi-weekly event.

Event name gives the name of the restaurant or the name of the event recommended

(calendar.csv) :

	week	event_type	event_name
0	1	team meal	Yats
1	2	team meal	The Friendly Tavern
2	2	event	Tedeschi Trucks Band - Wheels of Soul
3	3	team meal	Sub 16
4	4	team meal	Thai Recipes Restaurant
5	4	event	Barenaked Ladies - Last Summer on Earth Tour
6	5	team meal	Convivio Italian Artisan Cuisine - Zionsville
7	6	team meal	Mama Carolla's
8	6	event	Santana and Earth, Wind & Fire - Miraculous Su...
9	7	team meal	Twenty Tap
10	8	team meal	The Jazz Kitchen
11	8	event	The Basement in 30 Tour
12	9	team meal	Another Broken Egg Cafe
13	10	team meal	Chatham Tap Mass Ave
14	10	event	Mind Tripping Show - A Comedy with a Psycholog...

I also gathered more information for each event such as location, ratings, dates, etc. For the team meal here is the details about all restaurants recommended (**restaurants.csv**):

name	price_level	rating	types	vicinity
The Spot Nutrition	NaN	5.0	[restaurant, food, point_of_interest, establis...	4202 South Meridian Street Suite E, Indianapolis
Yats	1.0	4.8	[restaurant, food, point_of_interest, establis...	5363 North College Avenue, Indianapolis
The Friendly Tavern	2.0	4.7	[bar, restaurant, food, point_of_interest, est...	290 South Main Street, Zionsville
Sub 16	1.0	4.7	[restaurant, food, point_of_interest, establis...	640 South Main Street #300, Zionsville
Thai Recipes Restaurant	2.0	4.7	[restaurant, food, point_of_interest, establis...	404 Thompson Road g2, Indianapolis
Convivio Italian Artisan Cuisine - Zionsville	2.0	4.7	[restaurant, food, point_of_interest, establis...	40 South Main Street, Zionsville
Mama Carolla's	2.0	4.7	[restaurant, food, point_of_interest, establis...	1031 East 54th Street, Indianapolis
Twenty Tap	2.0	4.7	[bar, liquor_store, restaurant, food, point_of...	5406-08 North College Avenue, Indianapolis
The Jazz Kitchen	2.0	4.7	[bar, restaurant, food, point_of_interest, est...	5377 North College Avenue, Indianapolis
Another Broken Egg Cafe	2.0	4.6	[cafe, restaurant, food, point_of_interest, es...	8626 East 116th Street #175, Fishers

I chose these restaurants because they had the best ratings on google maps and were in proximity of the given coworking spaces.

Here is more information about each bi-weekly event (**events.csv**):

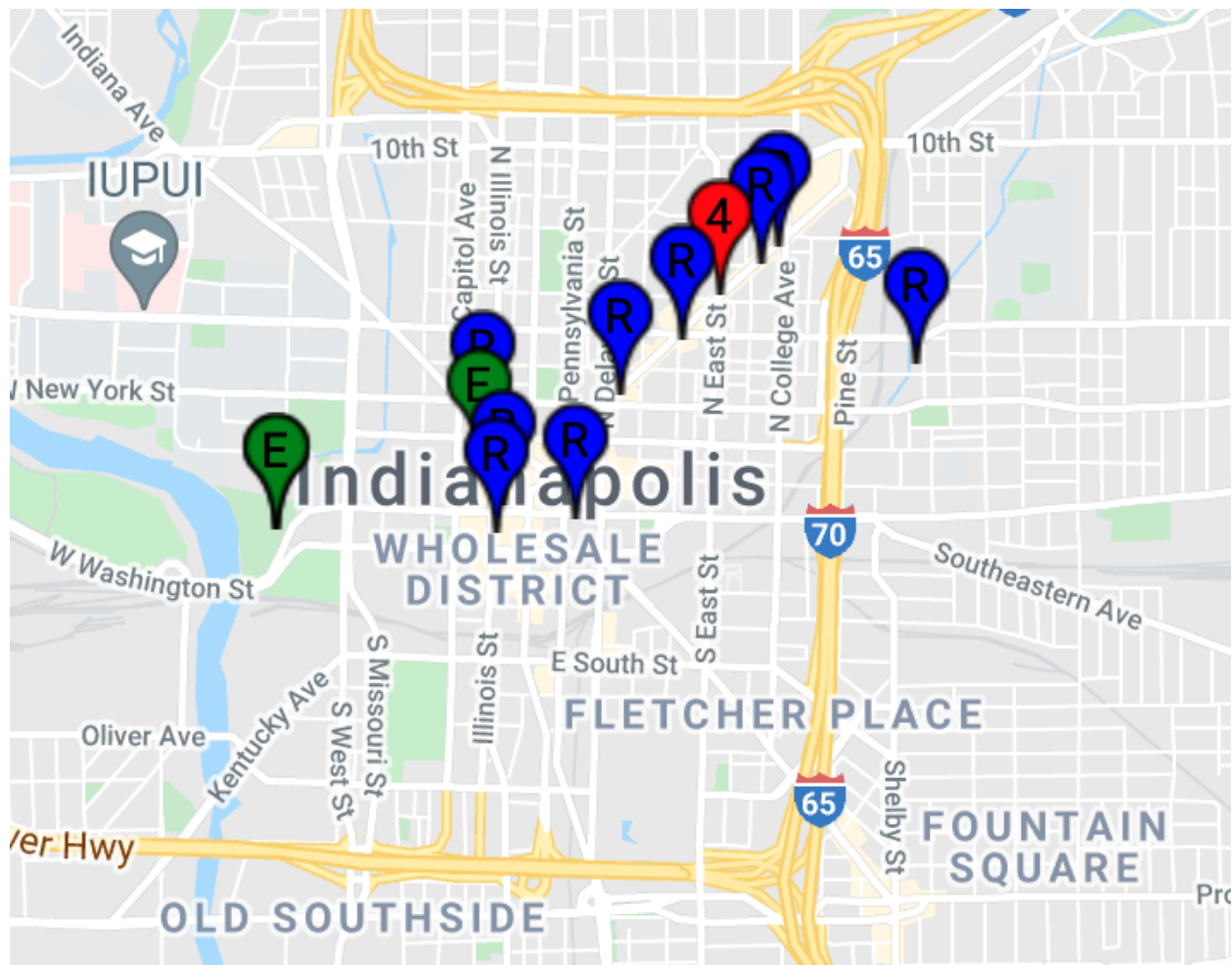
	name	location	date	time
1	Antony and Cleopatra	3 Center Green Carmel, IN 46032	Date: June 9-11, 2022	Time: 7:00 PM
2	Tedeschi Trucks Band - Wheels of Soul	801 W. Washington St. Indianapolis, IN 46204	Date: June 28, 2022	Time: 6:30 PM
3	Barenaked Ladies - Last Summer on Earth Tour	801 W. Washington St. Indianapolis, IN 46204	Date: July 1, 2022	Time: 7:00 PM
4	Santana and Earth, Wind & Fire - Miraculous Su...	800-745-3000	Date: July 8, 2022	Time: 7:00 PM
6	The Basement in 30 Tour	317-492-6784	Date: October 17, 2021-December 31, 2022	Time: 10:00 AM
7	Mind Tripping Show - A Comedy with a Psycholog...	120 W. Market St. Indianapolis, IN 46204	Date: October 22, 2021-December 31, 2022	Time: 8:00 PM

These are the events I found on the Visit Indy website that fit the correct time frame for 2022.

## Conclusion

From the map we can see that there are good options for all of the locations. If we inspect the data set further we can find that there are restaurants with good ratings around all locations. The events are also somewhat scattered around town.

However, if we zoom in, we can see that most events and restaurant options are clustered around coworking space number 4:



Because of this data, I would recommend coworking space number 4 and the presented calendar as best fitting for Xtern 2022.