Data Acquisition and Analysis - Capstone Project

Data Sources:
   I used Two datasets along with Folium and Foursquare APIs.
         The first dataset is from Kaggle Crimes data and the Second dataset is from Chicago Public Schools Report.
         I used Folium for visualization of data and the Foursquare API to find the venues near the neighborhood.

Data Analysis:
   1. Crimes data analysis:
       Since my goal is to find the safe neighborhood I wanted to find how many arrests were made in that neighborhood, ignoring the minor crimes. The redundant data were removed, the missing values were addressed in that dataset. The Final, dataset contains neighborhoods where No arrest were made and their geospatial coordinates.

   2. Chicago Public Schools Report analysis:
       Here, my goal is to find the safest schools in the neighborhood, so i focused on the Highest Safety score that the neighborhood schools got. Again, I removed the redundant data, addressed the missing values in the dataset. Final dataset contains neighborhood schools with the highest Safety score and their corresponding geospatial coordinates.
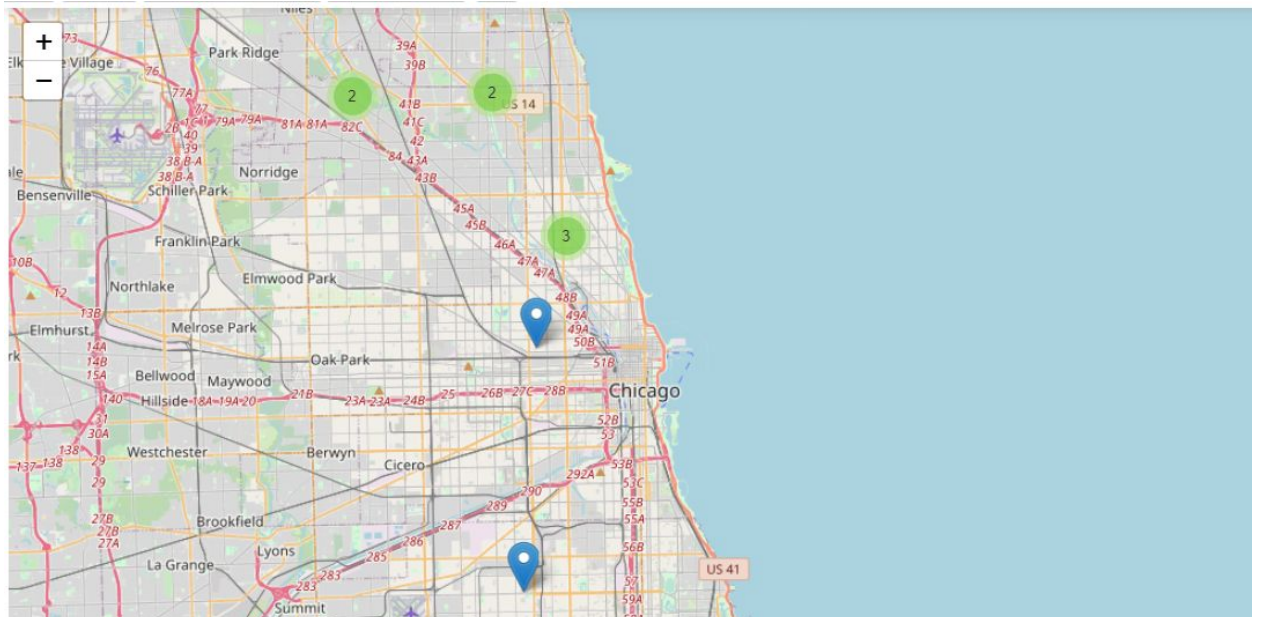
The above two datasets were merged to get the safe neighborhoods with highest safety score schools

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safe_chicago
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	Neighborhood	NAME_OF_SCHOOL	Latitude	Longitude
0	LINCOLN PARK	Abraham Lincoln Elementary School	41.924497	-87.644522
1	NORTH CENTER	Alexander Graham Bell Elementary School	41.949528	-87.686055
2	MOUNT GREENWOOD	Annie Keller Elementary Gifted Magnet School	41.697198	-87.697264
3	LAKE VIEW	Augustus H Burley Elementary School	41.937965	-87.669852
4	PULLMAN	Edgar Allan Poe Elementary Classical School	41.702620	-87.606456
5	FOREST GLEN	Edgebrook Elementary School	41.999460	-87.761821
6	WEST TOWN	Ellen Mitchell Elementary School	41.892055	-87.683179
7	CHATHAM	James E McDade Elementary Classical School	41.734514	-87.619177
8	NORTH PARK	Northside College Preparatory High School	41.981352	-87.708672
9	NORWOOD PARK	Norwood Park Elementary School	41.988181	-87.802992
10	WEST RIDGE	Stephen Decatur Classical Elementary School	42.009307	-87.704655
11	GAGE PARK	Talman Elementary School	41.794074	-87.690298

3. Folium:
   I used Folium to Visualize the data

4. Foursquare API was used to get the nearby venues of the neighborhoods:

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	CHATHAM	Fast Food Restaurant	Discount Store	Intersection	Restaurant	Train Station	Food	Gas Station	Gastropub	Gift Shop	Donut Shop
1	FOREST GLEN	Sandwich Place	American Restaurant	Bus Station	Ice Cream Shop	Grocery Store	Gas Station	Mexican Restaurant	Optical Shop	Park	Diner
2	GAGE PARK	Mexican Restaurant	Convenience Store	Park	Asian Restaurant	Sandwich Place	Currency Exchange	Yoga Studio	Gas Station	Furniture / Home Store	Fried Chicken Joint
3	LAKE VIEW	Gym / Fitness Center	Salon / Barbershop	Pizza Place	Bar	Gym	Furniture / Home Store	Massage Studio	Restaurant	Thrift / Vintage Store	Yoga Studio
4	LINCOLN PARK	Bar	Coffee Shop	Sushi Restaurant	Sandwich Place	Italian Restaurant	Thai Restaurant	Pizza Place	Gym	Burger Joint	Café
5	MOUNT GREENWOOD	Park	Intersection	Gourmet Shop	Home Service	Eastern European Restaurant	Falafel Restaurant	Fast Food Restaurant	Flower Shop	Food	Food Truck
6	NORTH CENTER	Pizza Place	Bus Station	Sandwich Place	Pub	Fast Food Restaurant	Mexican Restaurant	Cosmetics Shop	Convenience Store	Mediterranean Restaurant	Coffee Shop
7	NORTH PARK	Korean Restaurant	Tea Room	Mediterranean Restaurant	Music Venue	Asian Restaurant	Japanese Restaurant	Park	Taco Place	Coffee Shop	Bus Station
8	NORWOOD PARK	Park	Dog Run	Diner	Gym	Hobby Shop	Clothing Store	Juice Bar	Fast Food Restaurant	Gastropub	Food
9	PULLMAN	History Museum	Food	Yoga Studio	Gourmet Shop	Donut Shop	Eastern European Restaurant	Falafel Restaurant	Fast Food Restaurant	Flower Shop	Food Truck