Spring Term Computer Science Final Project
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Project Description

We plan to create a website that will display multiple subset views of all of the landmarks in New York City. We also plan to correlate this data with SAT scores by school district/borough though our main goal is to look at the large landmark data set and look at subviews of the data.

Data Descriptions / Sources

- https://data.cityofnewyork.us/Housing-Development/Individual-Landmarks/ch5p-r223
  - Provided data on every individual landmark in New York City and distinguishes whether it is an individual landmark, scenic landmark, interior landmark, or in a historical district. It also provided information on location and date of landmark designation.
- https://data.cityofnewyork.us/Education/2012-SAT-Results/f9bf-2cp4
  - Provided data on the performance of schools in the SAT and distinguishes schools based on school districts.
- https://data.cityofnewyork.us/Education/School-Districts/r8nu-ymqj/data
  - Provided the geographical boundaries of the school districts of New York City used in the making of the maps.
- https://data.cityofnewyork.us/City-Government/Borough-Boundaries/tqmj-j8zm/data
  - Provided the geographical boundaries of the boroughs of New York City used the making of the maps.
- https://data.cityofnewyork.us/Housing-Development/Historic-Districts/xbvj-gfnw/data
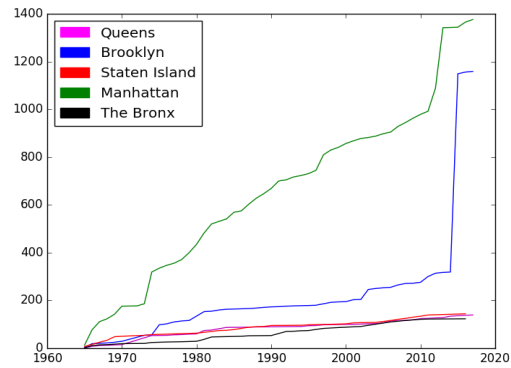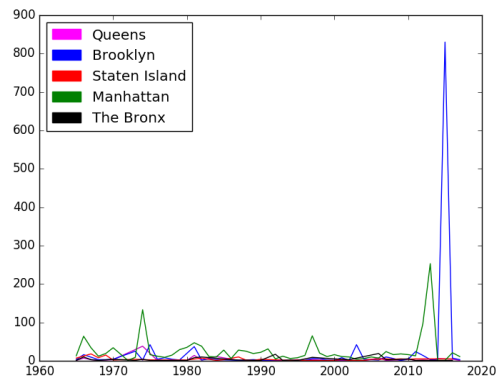 - Provided the geographical boundaries of the historical districts of New York City used in the making of the maps.

Images / Description of User Interaction / Forms and What Data Will Display

- Line Graphs

    Check boxes to only show specific boroughs or specific types of landmarks

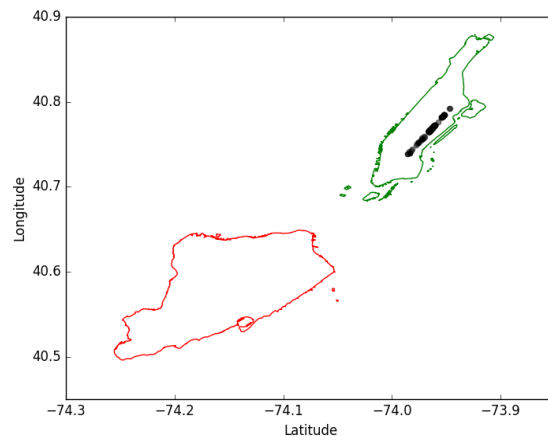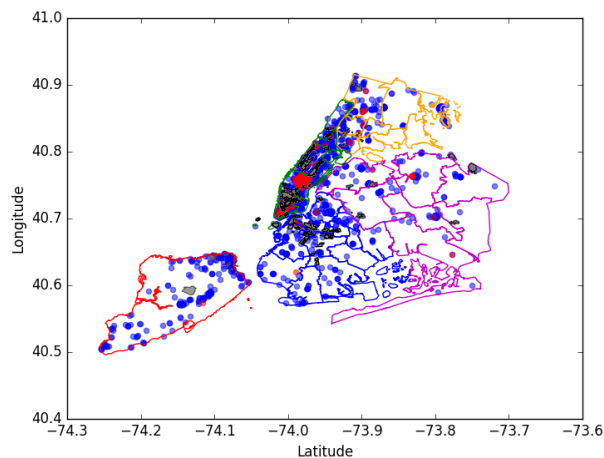   Color code the lines

    Look to see added per year or the total at that year.

- Map

    The user can choose which borough or school district map to look at and the map will display whatever landmarks the user picks

    The type of landmarks will be distinguished by color

Project Phases
1. Create a table that has a breakdown of all the types of landmarks per borough
   COMPLETE
   a. In addition to the number of landmarks in historic districts, display the actual number of districts in each borough
      COMPLETE
   b. Create a bar graph that will also do this task for better visualization
      PENDING
2. Create a line graph that shows the number of landmarks designated over the years
   a. Allow user to choose between a graph that shows landmarks added per year or landmarks added at that year
      COMPLETE 6/2/18
   b. Allow the user to choose which boroughs display in the line graph
      COMPLETE 6/3/18
   c. Add axes labels
      COMPLETE 6/3/18
   d. ~~Allow the user to choose which landmarks to display on the line graph~~
      ~~**PENDING**~~
      Goal removed as of 6/9/18 because there are not enough data points to produce a viable graph with selective landmarks
3. Allow user to search for specific landmarks by name or by street address
   a. Allow user to search for landmarks by street name on map
      COMPLETE 6/10/18
   b. Allow user to search for landmarks by name on map
      COMPLETE 6/10/18
4. Make the website display a random landmark out of a small preselected number of landmarks
   a. Create a separate smaller CSV file with the preselected landmarks.
   COMPLETE 6/10/18
5. Show a map of the city with all of the landmarks
   a. Allow the user to choose which landmarks to display
      COMPLETE 6/9/18
   b. Allow the user to choose a specific borough map
      COMPLETE 6/9/18
   c. Display borough maps with school district boundaries
      COMPLETE 6/8/18
   d. Be able to hover on boroughs or school districts to get names of locations
      i. Trace out borough and district boundaries and get coordinates for mapping
      COMPLETE 6/11/18

6. Gather data on schools throughout the city and make a table from it
    a. Display the SAT performance from each school
    b. Display the number of districts per borough and the number of schools per district.
    c. Add ability to click on map and bring user to the tables.
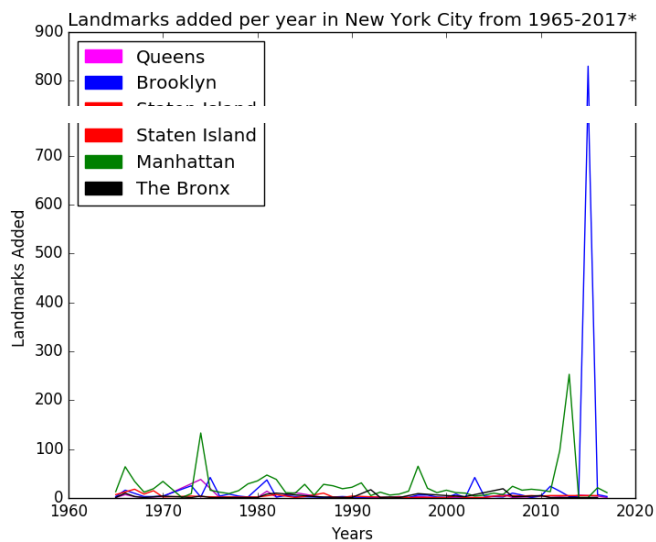   **COMPLETE 6/11/18**

Stretch Goals
- Add more preselected landmarks to the randomizer.
- Fixing typos and making the website more stylistically cohesive.
- Create a randomizer that displays certain schools along with information
- Create a graph to show the correlation between average SAT scores and the concentration of landmarks in area
  (We were only able to allow the user to see landmark concentrations, and then look at the SAT info for school districts/ boroughs, but we were not able to concretely show the correlation).

Pre Usability Test Website June 3rd, 2018

NYC Landmarks

Lau, Eric and Sultan, Ahmed / Konstantinovich pd 4 intro Comp Sci 2

Boroughs	Total Landmarks	Landmarks in Historic Districts	Individual Landmarks	Interior Landmarks	Scenic Landmarks
Queens	5061	4840 (11 districts)	181	14	0
Brooklyn	19152	18597 (34 districts)	355	8	49
Staten Island	1120	824 (4 districts)	245	3	0
Manhattan	21194	19136 (84 districts)	1565	118	137
The Bronx	1263	959 (12 districts)	240	7	0
Total	47790	44356 (145 districts)	2586	150	186

Landmarks added per year in New York City from 1965-2017*

Legend:
- Queens
- Brooklyn
- Staten Island
- Manhattan
- The Bronx

Landmarks Added (y-axis), Years (x-axis)

Landmarks added per year ▼

- ☐ Queens
- ☐ Brooklyn
- ☐ Staten Island
- ☐ Manhattan
- ☐ The Bronx
- ☐ Historic Districts
- ☐ Individual Landmarks
- ☐ Scenic Landmarks
- ☐ Interior Landmarks

Refresh

*Our data source has a lot of missing landmark designation dates so the numbers may not be 100% accurate

New York City ▼

- ☐ All Landmarks
- ☐ Historic Districts
- ☐ Interior Landmarks
- ☐ Scenic Landmarks
- ☐ Individual Landmarks

Refresh

Eric - usability test on June 3rd, 2018

    Subject - Vicki Lau

1. **Find the years in which the Bronx had more total landmarks than the Queens**
User looked at the table first but then scrolled down to the graphing area.
User checked the boxes with the Bronx and Queens
Did not pay attention to the selector but changed it on the second time through.
2. **Show the graph of the individual landmarks in Brooklyn**
User had no difficulty choosing the correct borough or the correct landmark
3. **Find the years in which the Bronx had more landmarks added than in Manhattan**
User was able to change the selector and also check the correct boxes
4. **Compare the number of individual landmarks in Brooklyn to Staten Island**
User at first scrolled down to the map area
Realized she should look at the table at the top instead.

Ahmed - usability test on June 3rd, 2018

    Subject - Nahla Mohamed

1. **Find the years in which the Bronx had more total landmarks than the Queens**
User scrolled to the graph and checked the boxes with "the Bronx" and "Queens"
Successfully graphed and was able to report back with the correct result
2. **Show the graph of the individual landmarks in Brooklyn**
User had no difficulty choosing the correct borough or the correct landmarks
3. **Find the years in which the Bronx had more landmarks added than in Manhattan**
User had no difficulty changing the selector and checking the correct boxes
4. **Compare the number of individual landmarks in Brooklyn to Staten Island**
User remembered the graph at the top of the website, and had no problem completing this task