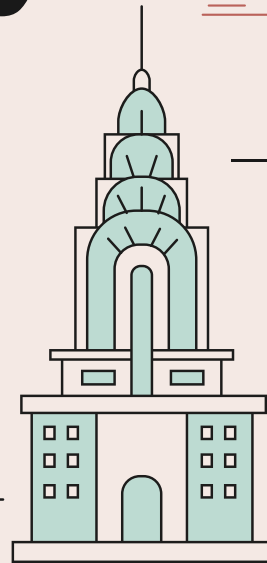
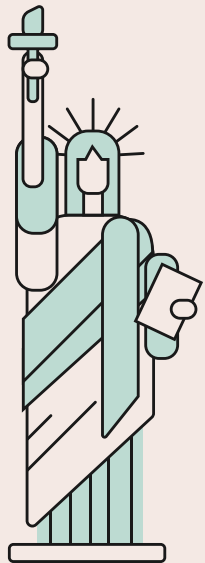


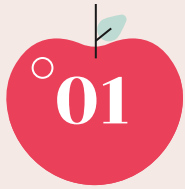


Local Friendly

Pedestrian Navigation

+
Aditi Chatradhi, Crystal Diaz,
Angelo Gjoni, Daniel Luce, &
Raony Nadal





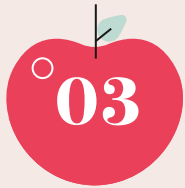
Our Task

About Local Friendly
and our teams goals



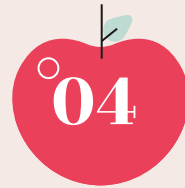
Data Analysis

Open data use and
challenges



Process & Outcomes

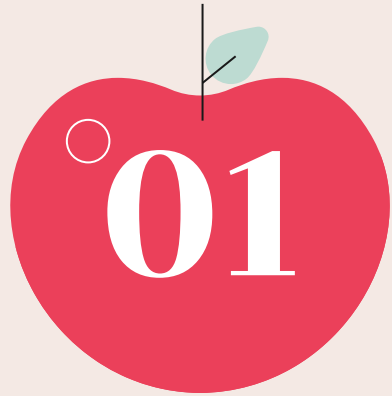
Our functions and their
uses



Future Steps

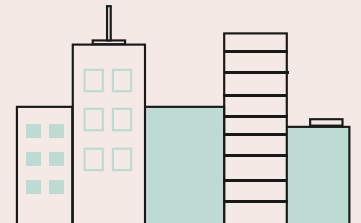
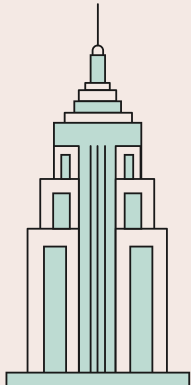
What challenges lie
ahead for the app





Our Task

About Local Friendly and our team's goals



What is Local Friendly?

A pedestrian mobility app that:

- Lets users move around a city with greater ease
- Shows the physical accessibility of a destination
- Shows the best way to get there
- Serves families with young and old dependents, delivery people, injured and disabled pedestrians, shoppers, and everyone else!



Our Project & Goals

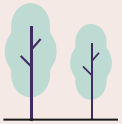


- Find useful & publicly available NYC data
- Compile & clean the data
- Create useful visualizations of the data
- Develop functions to extract & use the data
- Identify next steps for the developer



Data Analysis

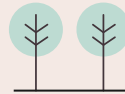
Open data use and challenges



Bench Data



- Important information for pedestrians
- Data is not typically utilized in other transportation apps
- Data set is incomplete and not updated



Ramp Data



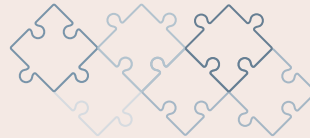
- Vital information for disability access and those with carts/strollers
- Large, robust data set from NYC Open Data
- Recently and regularly updated



Pavement Data



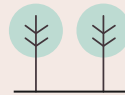
- Useful information for pedestrian safety on street sidewalks
- Broad dataset
- Dataset is provided by the DOT and is updated frequently-every month



Tree Data



- Collapsing trees are very common during inclement weather
- Can lead to street closures and future construction zones!



Live Winter Road Conditions Data



- Snow can lead to difficulties crossing the streets and navigating the city
- People with handicaps will find it especially difficult to cross roads



Live Emergency Alerts Data



- Live data that helps keep track of current emergency scenarios to help people navigate around them

Rest Areas



- Data for locations of public restrooms in the city
- Helpful for people who spend long hours outside

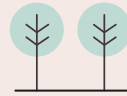
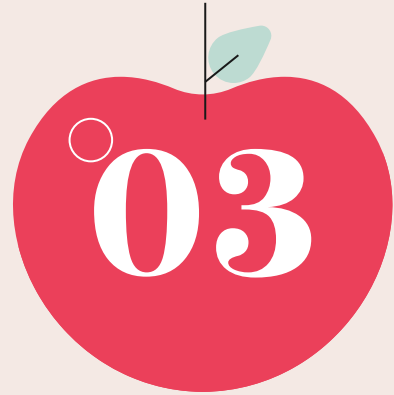
Live Special Events Data



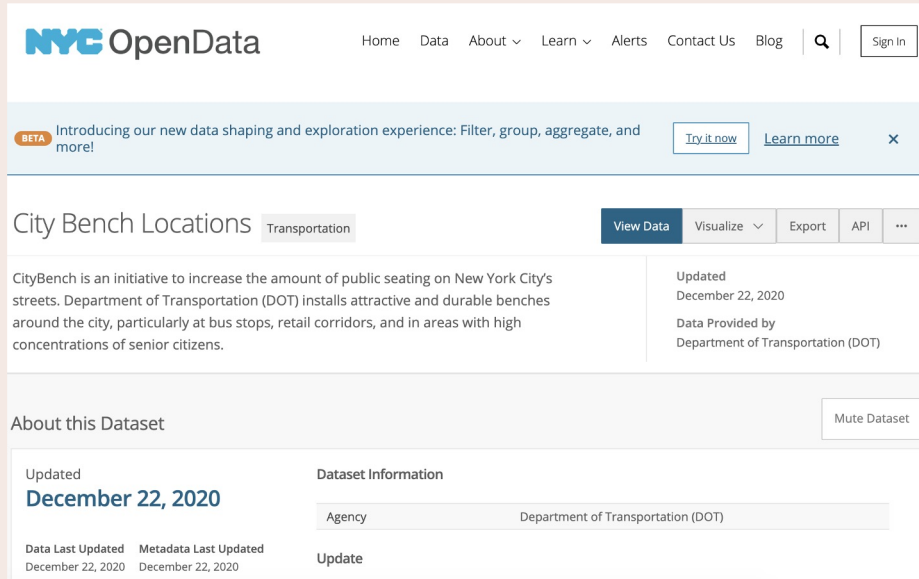
- Live public events data to bring awareness to fun or interesting activities in the city

Process & Outcomes

Our functions and their uses



Collecting and Processing



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BETA Introducing our new data shaping and exploration experience: Filter, group, aggregate, and more! [Try it now](#) [Learn more](#) ×

City Bench Locations

 Transportation View Data Visualize ▾ Export API ⋮

CityBench is an initiative to increase the amount of public seating on New York City's streets. Department of Transportation (DOT) installs attractive and durable benches around the city, particularly at bus stops, retail corridors, and in areas with high concentrations of senior citizens.

Updated
December 22, 2020
Data Provided by
Department of Transportation (DOT)

About this Dataset Mute Dataset

Updated
December 22, 2020

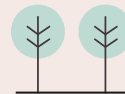
Data Last Updated: December 22, 2020 Metadata Last Updated: December 22, 2020

Dataset Information

Agency	Department of Transportation (DOT)
--------	------------------------------------

Update

- Utilized data from NYC Open Data
- Some aspects are more updated than others
- Other data updated as recent as March of 2022 with projects lasting up to two years



Transforming Location Data



Address Data

When searching and routing, people input address data, which is less intuitive with distance

Easier for humans to read



Coordinate Data

Many of the data sets use coordinate data, which we successfully converted the address data to

Easier for machines to read



Mapping the Data



+

To help visualize the given data and to check for data quality, we created maps using the Folium package in Python

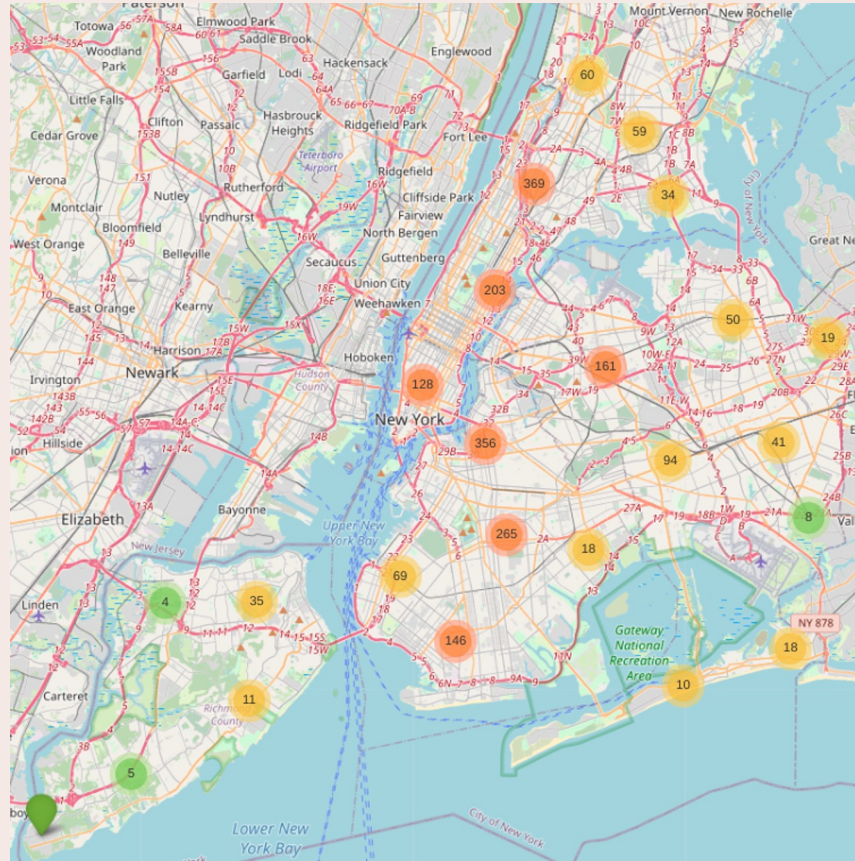


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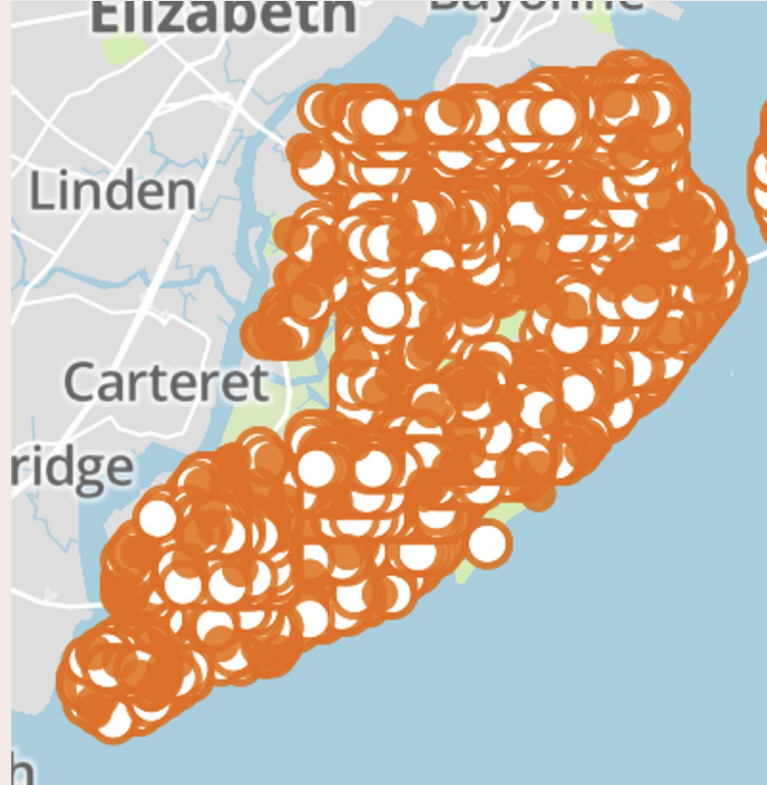
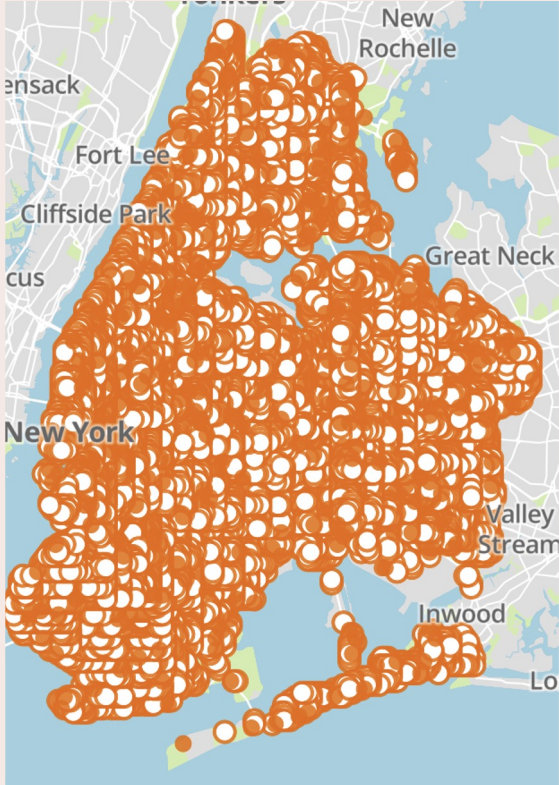
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Map of NYC Benches



Provided by NYC OpenData

Map of NYC Ramps

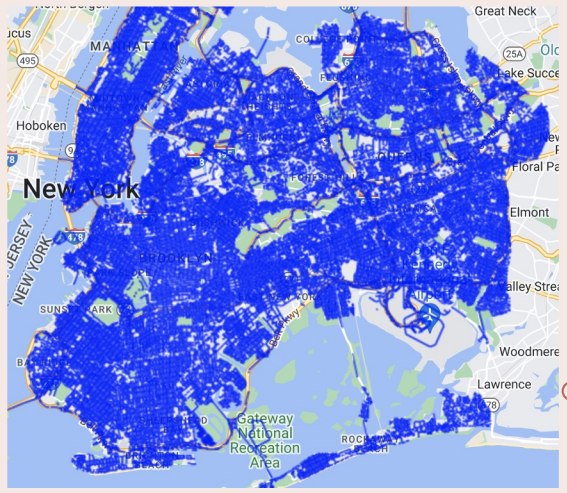
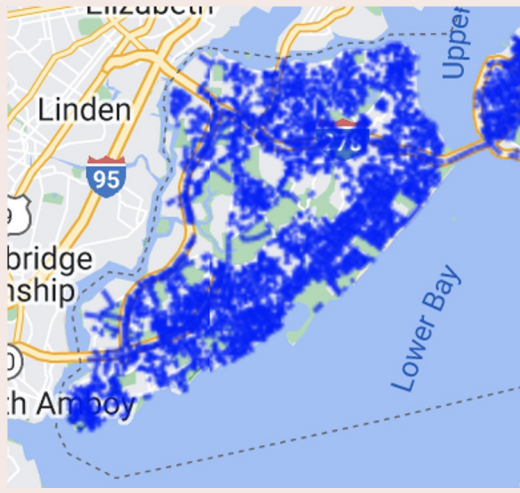
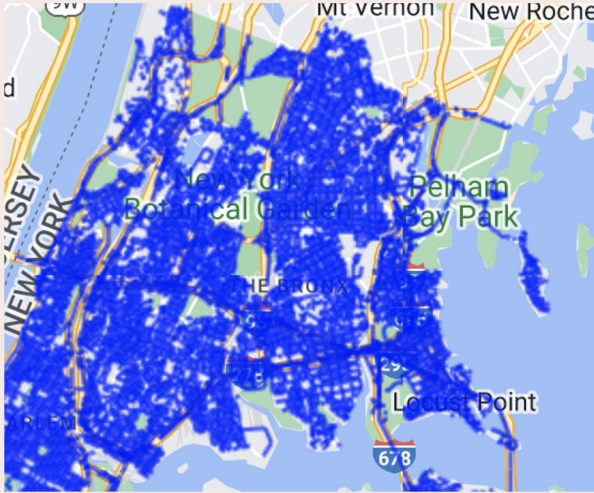
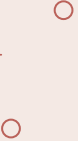


Provided by NYC OpenData

Map of NYC Street Pavement



+



+

Final Functionality



```
proximity_fun("1255 Amsterdam Ave, New York, NY")
```

```
1 benches within 100 meters
```

```
16 ramps within 100 meters
```

```
proximity_fun("1600 Pennsylvania Avenue NW, Washington, DC")
```

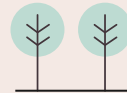
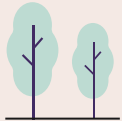
```
Invalid NYC Address
```

```
Invalid NYC Address
```



Future Steps

What challenges lie ahead for the app



Adding Pavement Data Function

```
'MULTILINESTRING ((-74.21214990871114 40.51645077285563, -74.21193662972665 40.51648274607958, -74.21172388923895 40.51651674267933, -74.21151171837656 40.5165527552809, -74.21130015187329 40.51659077924874, -74.21108922086673 40.516630809954194, -74.21087895768194 40.516672839106896, -74.21066939705086 40.51671686115697, -74.21046056890725 40.516762869648815, -74.21025250797766 40.516810857203176, -74.21002563856003 40.5168636584521))'
```

1. Data preprocessing
 - a. Extract the data from the strings
2. Calculate the distance from the input address to each pavement
3. Determine if the pavement is close to the address
4. Record the number of pavements that around the address
5. Output the result