

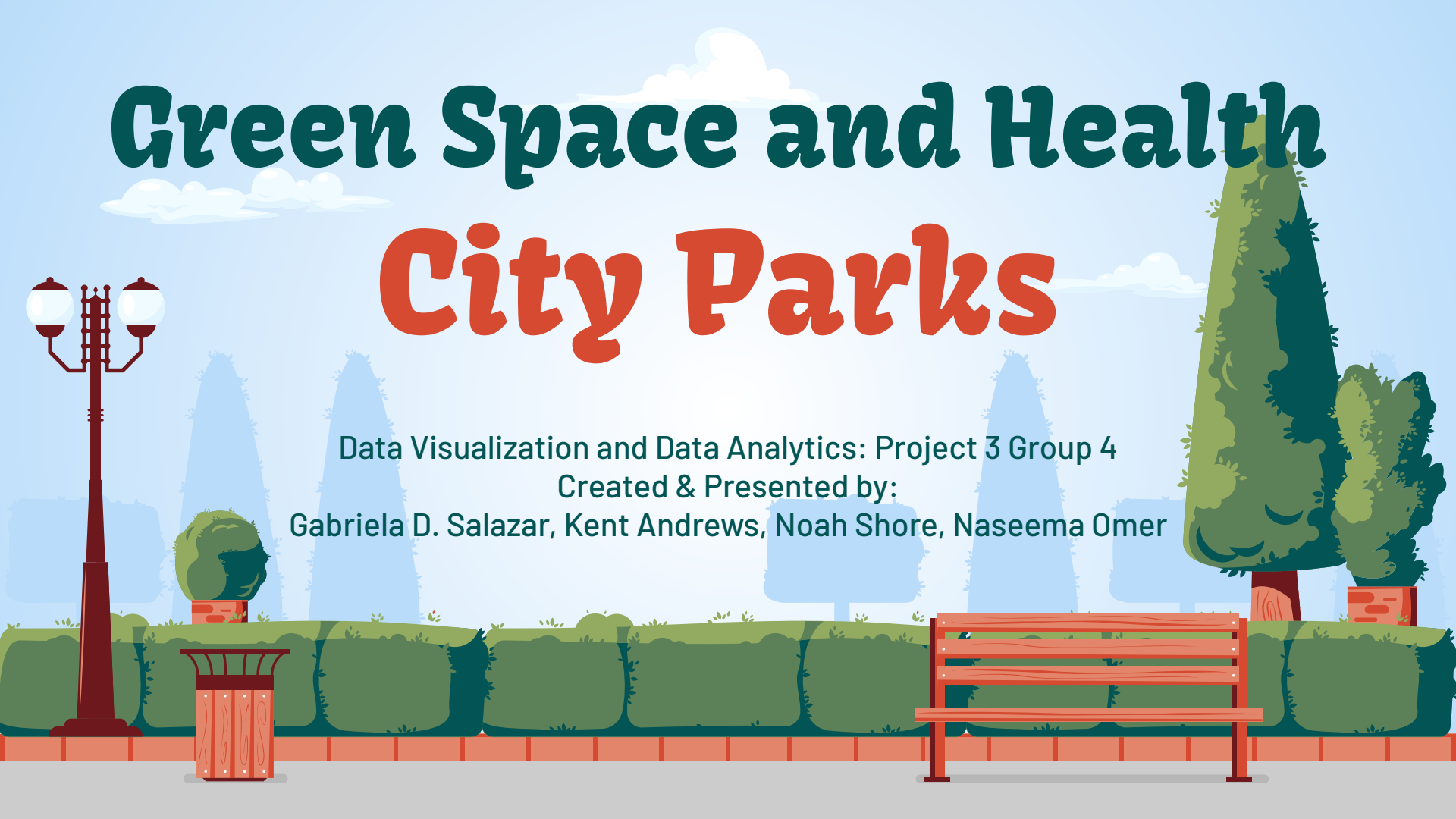
# Green Space and Health

## City Parks

Data Visualization and Data Analytics: Project 3 Group 4

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## Description

What data was used?

02

## Hypothesis & Research Questions

People are healthier in cities that have more green space (city parks).

03

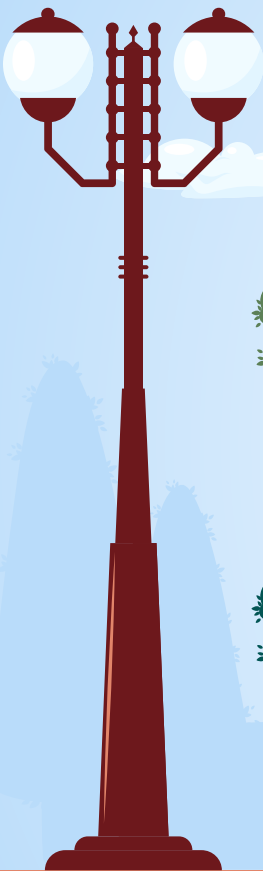
## Analysis - The Story

Illustrated with Visualizations

04

## Next Steps

How we can use green spaces to be healthier





01

# Description

## Data Selection

### City ParkScore Dataset

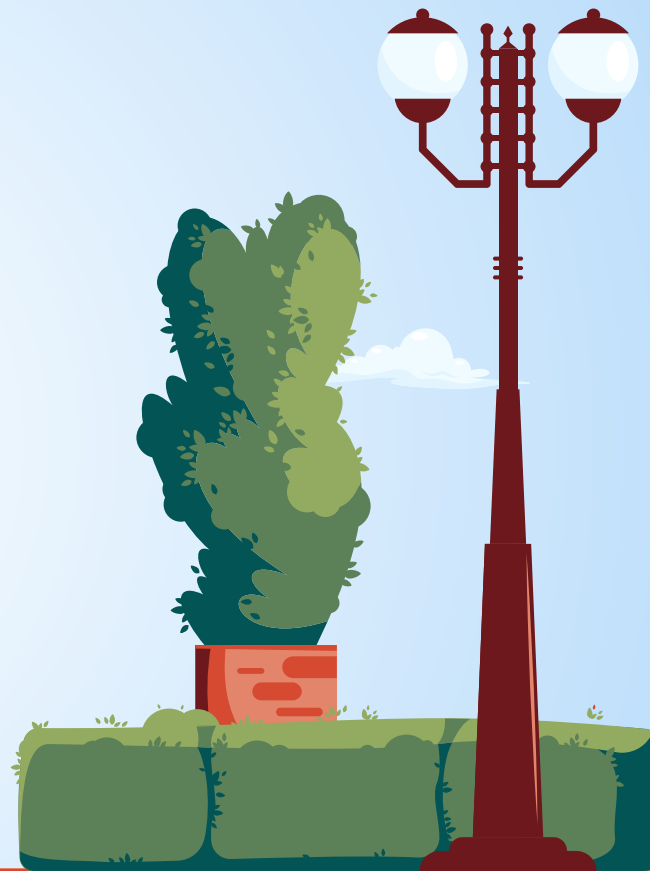
- Park acreages
- Percent of city that is city park land

### CDC 500 Cities Data

- Prevalence of obesity and poor mental health self reporting in city
- Population that attends annual and routine doctor appointments

### City Coordinates

- Used to create the maps





02

# Hypothesis

Cities with larger City Parks have:

- Lower Obesity rankings
- Lower Mental Health conditions
- Greater adherence to regular doctor visits for routine check-ups.

# Research Questions

## Identify:

### City Parks

The acreage of city parks  
in cities across the USA



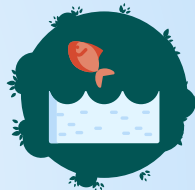
### Obesity

Prevalence in those cities



### Mental Health

Self-reported prevalence  
in those cities



### Routine check-ups

Adherence Rate





03

# Story Time

- Definition of Green Spaces
- Health Information
  - Score Values
    - Obesity
    - Mental Health
    - Dr. Visits
  - Age Ranges



# Story Time (cont.)

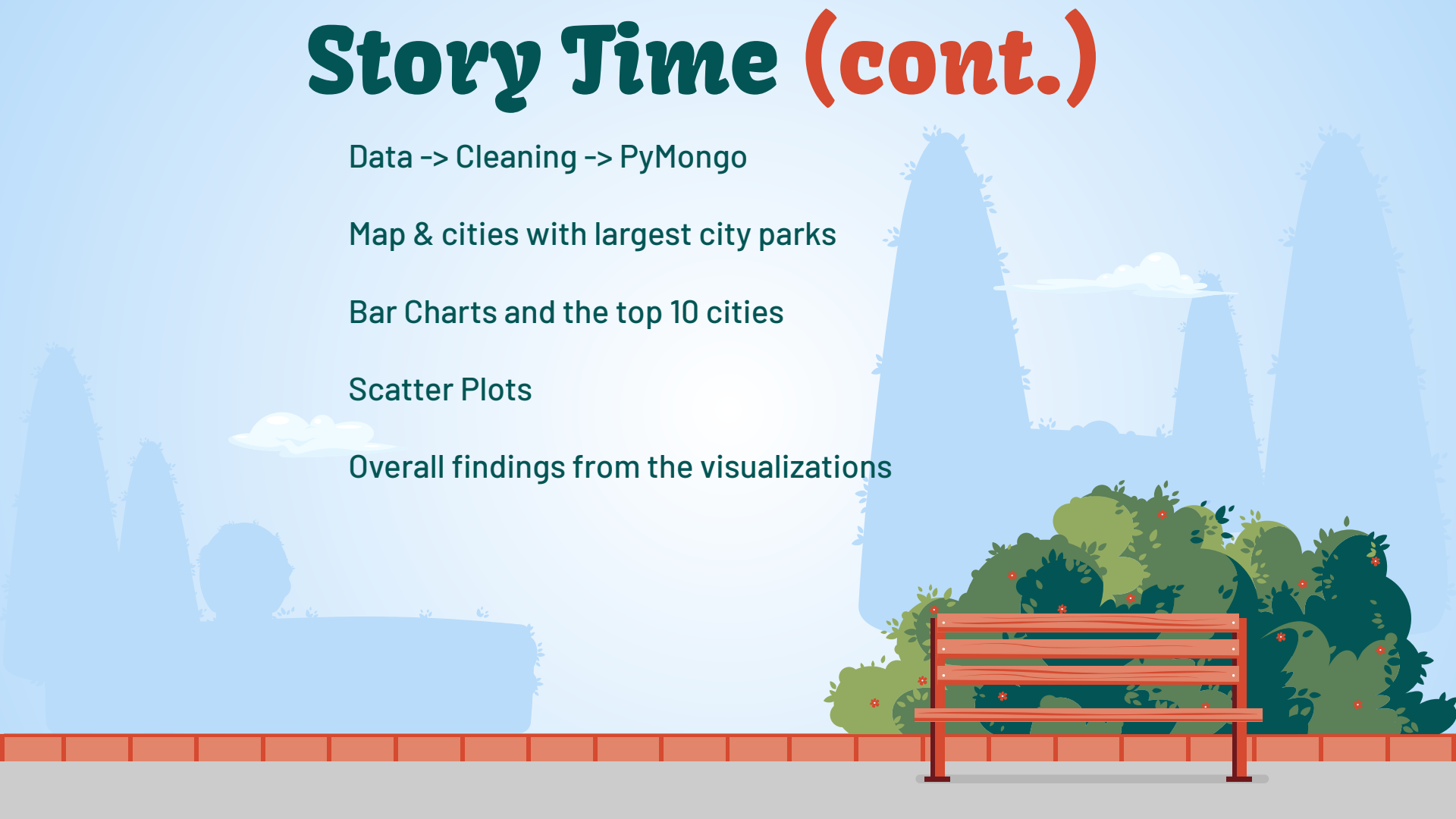
Data -> Cleaning -> PyMongo

Map & cities with largest city parks

Bar Charts and the top 10 cities

Scatter Plots

Overall findings from the visualizations



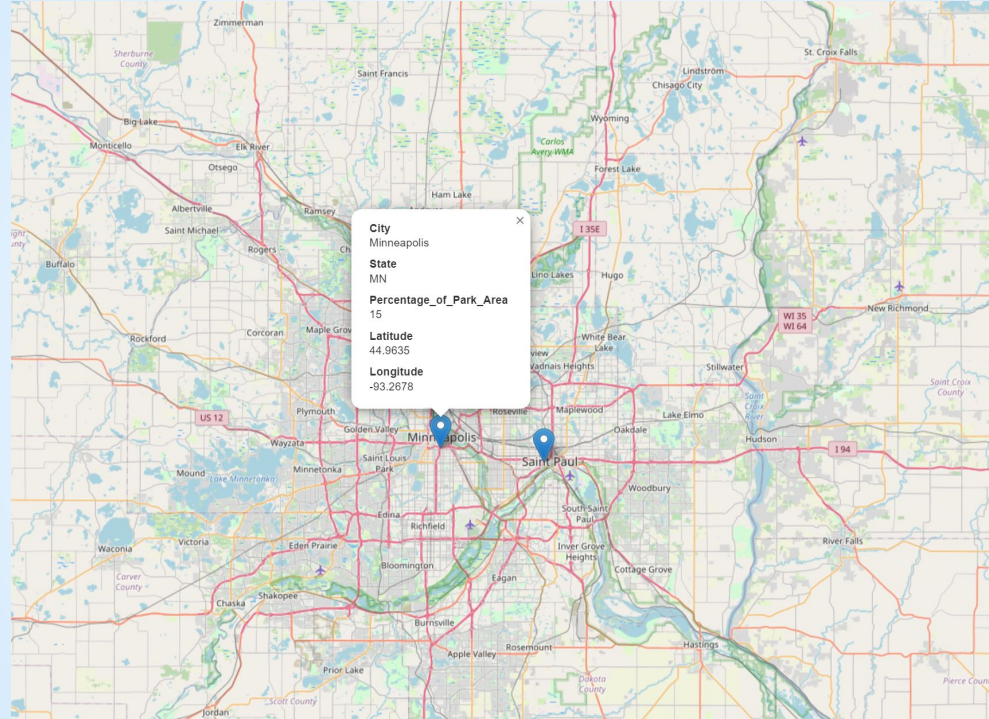
# Visualization 1: City Park Map

Map of all the Cities in Project, and their % Acreage



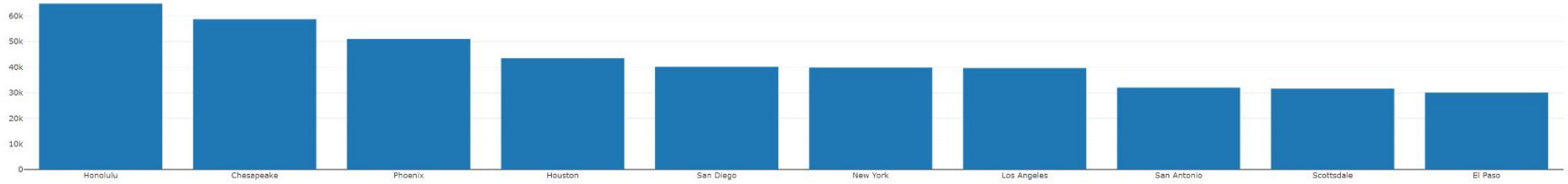


# Visualization 1: Interactive Map with city information

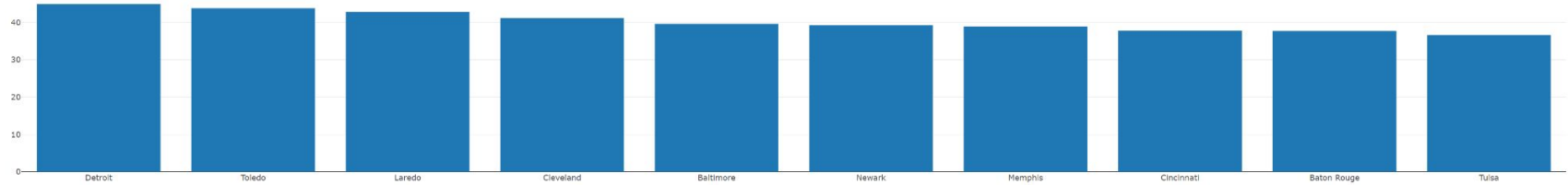


# Visualization 2: Bar Chart explained

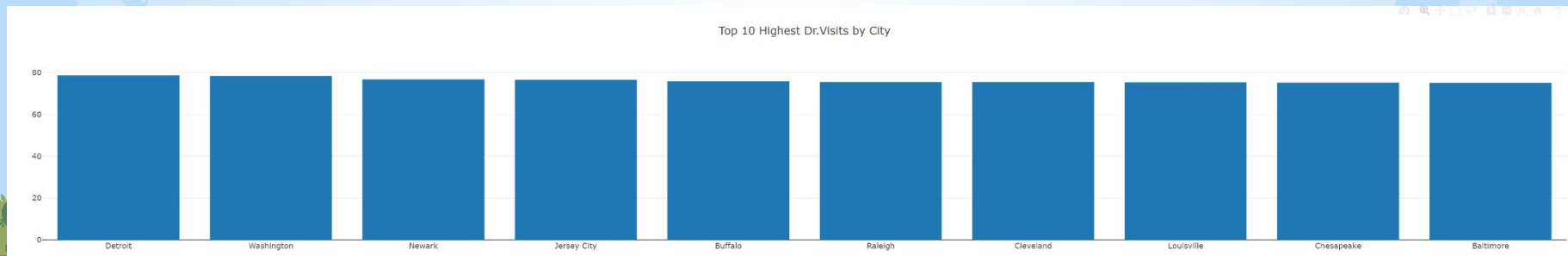
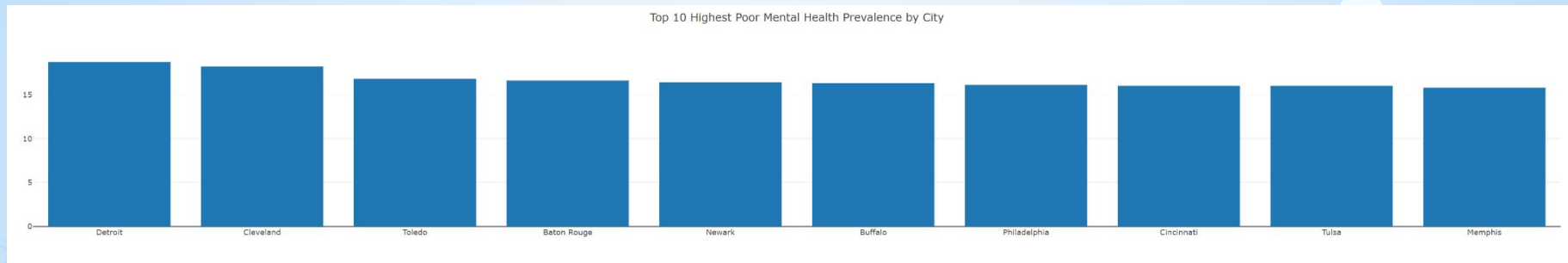
Top 10 Park Averages by City



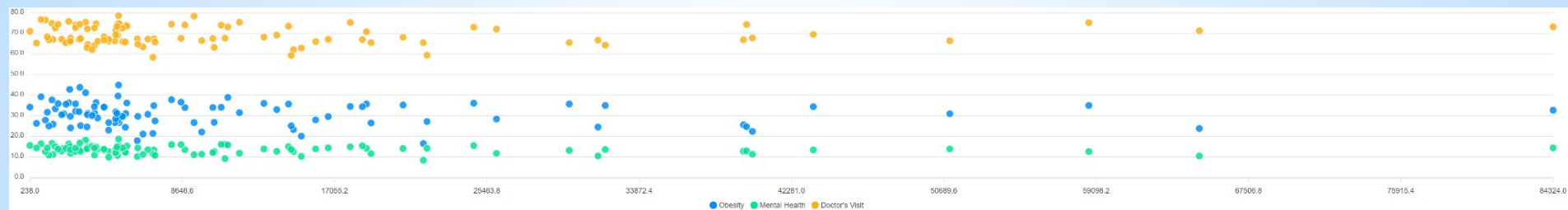
Top 10 Highest Obesity Prevalence by City



# Visualization 2: Bar Chart explained (cont.)



# Visualization 3: Scatter Plot explained



# Year 2017 cities with the highest , lowest, and midpoint percentage of park acreage

01

**City, State**

Ankorage, AK  
Park Area: 80 %

Obesity value: 34.1  
Mental Health value: 11.0  
Dr. Visits value: 54.2

02

**City, State**

Fremont, Ca  
Park Area: 44 %

Obesity: 16.5  
Mental Health: 8.4  
Dr. Visits: 65.5

03

**City, State**

Hialeah, Fl  
Park Area: 2 %

Obesity: 34.2  
Mental Health: 15.6  
Dr. Visits: 71.0

# Findings / conclusions



## About Obesity

What did you learn about Obesity?

There is no clear correlation between the green space of a city and its obesity rates

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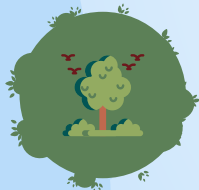


## Mental Health

What did you learn about Mental Health?

There is no clear correlation between the green space of a city and its self reporting mental health

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## Health Checkups

What did you learn about routine Dr. visits?

There is no clear correlation between the green space of a city and its adherence to routine check-ups

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# Limitations of the study

- Size of the dataset
- Mental Health measure



# 04

## Action Items

- Explore the park!
- Start /maintain park activity
- Maintain Health / Wellness Checkups
- Be more involved in your city/ state council meetings
- Incentive programs pertaining to green spaces and regular wellness checkups





# Next steps

- Parks to develop Apps for public to track their activities (fitness measures) completed in green spaces
- Park App: Parks to track park visits to leverage funding / grants. This may allow for more park educational and wellness offerings
- Additional research on density of the city, geographical locations and income levels in comparison to the number of city parks.



# SPECIAL THANKS

**Hunter Hollis, Instructor**

**Randy Sendek, TA**

**Sam Espe, TA**

# Thanks!

**Do you have any questions?**

CREDITS: This presentation template was created by **Slidesgo**, including icons by **Flaticon** and infographics & images by **Freepik**



# Data Set Citations

1. City ParkScore downloaded for year 2017 in zip file containing csv files

<https://www.tpl.org/park-data-downloads>

2. State: to get the State for the cites

<https://www.tpl.org/2023-city-park-facts>

3. CDC for 2017 health values

<https://data.cdc.gov/500-Cities-Places/500-Cities-Obesity-among-adults-aged-18-years/bivu-3y7d>

<https://data.cdc.gov/500-Cities-Places/500-Cities-Visits-to-doctor-for-routine-checkup-wi/2q6t-iyve>

<https://data.cdc.gov/500-Cities-Places/500-Cities-Mental-health-not-good-for-14-days-amon/i2ek-k3pa>

4. City Coordinates

<https://simplemaps.com/data/us-cities>

# WHOA!

Project details shared on:

**GitHub:** [https://github.com/NoahShore/City\\_Green\\_Space\\_and\\_Health](https://github.com/NoahShore/City_Green_Space_and_Health)

You are invited to read our README document

