



COMMUNICATE CLEARLY:

APPLYING VISUAL DESIGN
BEST PRACTICES IN REPORTING

MICHAEL HEWITT

SCENIC CITY SUMMIT

JUNE 20, 2025



ARISTA



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NEW SONG *Nashville*



AGENDA

- Prerequisites for good report design
- Simplify charts by eliminating noise
- Gestalt's Principles of Perception
- Report page layouts
- Choose colors
- Designing for visual impairments

The background is a faded, light-colored architectural drawing or blueprint. It features various lines, rectangles, and circles, suggesting a site plan or a technical drawing of a building complex. The lines are thin and grey, creating a subtle pattern across the entire image.

PREREQUISITES FOR GOOD REPORT DESIGN



REMEMBER!

WE'RE COMMUNICATING INFORMATION
AND INSIGHT FROM DATA





KNOW THE AUDIENCE





UNDERSTAND THE DATA





UNDERSTAND THE DATA STORY



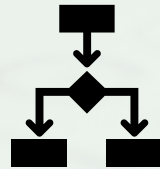


SELECT THE PRESENTATION FORMAT





CHOOSE THE CORRECT CHART(S)



CHOOSE THE CORRECT CHARTS

Michael Hewitt

Choosing Charts

Contact Me

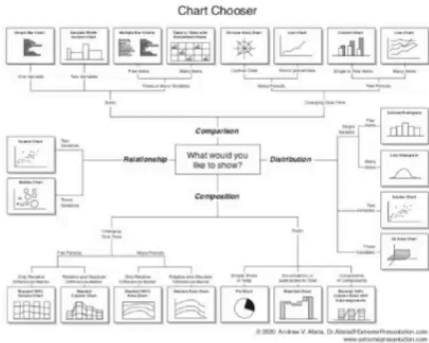
About

Nashville Modern Excel & Power BI User Group

Choosing Charts: Resources

Choosing Charts: Resources

Chart Chooser



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www.excelforecast.com

Visual Vocabulary

| | | |
|---|--|---|
| Deviation Emphasizes variation (or distance from the mean) in a dataset. It highlights the spread of data points around the average, often using bar charts or line graphs with error bars. | Correlation Shows the relationship between two or more variables. It highlights how one variable changes in response to another, often using scatter plots or line graphs. | Ranking Displays the relative position of data points within a dataset. It often uses horizontal bar charts or line graphs to show the order of values. |
| Distribution Shows the frequency of data points across different categories or ranges. It often uses bar charts or histograms to represent the shape of the data. | Change over Time Illustrates how a variable changes over a period of time. It often uses line graphs or area charts to show trends and fluctuations. | Part-to-Whole Shows the relationship between individual components and the total. It often uses pie charts or stacked bar charts to represent the composition of a whole. |
| Magnitude Emphasizes the size or intensity of a variable. It often uses bar charts or line graphs to show the relative values of different categories or over time. | Spatial Shows the relationship between data points and their location in space. It often uses maps or spatial plots to visualize geographic data. | Flow Illustrates the movement or flow of data between different categories or over time. It often uses Sankey diagrams or flow charts to show the direction and volume of the flow. |

Chart Chooser

by Dr. Andrew Abela

This image/PDF has been floating around the internet for several years. It serves as a great starting point anytime you need to create a visualization for any type of data project

Financial Times Visual Vocabulary: Power BI Edition

by Jason Thomas (SQLJason)

This is, perhaps, the nerdiest Power BI report ever! I particularly like the interactivity. This is also helpful if you're working on a Power BI project because the charts are presented as you will see them when working in Power BI. SQLJason has also written a blog post [here](#) that further explains the inspiration for this project.

Recent Posts

PASS Data Community Summit 2023, Day 3

PASS Data Community Summit 2023, Day 2

PASS Data Community Summit 2023, Day 1

Atlanta Microsoft Business Intelligence User Group

Use Excel's IMAGE() Function to Build a Custom Road Trip Bingo Game

Upcoming Speaking Events

February 10, 2024: SQL Saturday Atlanta 2024
- BI & Data Analytics Edition
Communicate Clearly: Applying Visual Design Best Practices in Reporting

March 9, 2024: DataTune 2024 Nashville
Power BI Unleashed: Harnessing Expert Insights For Transformative Data Visualization



EXAMPLES IN THIS TALK

- NYC Green Taxi dataset
- Green taxis “are restricted to picking up passengers in areas outside of Manhattan, such as Upper Manhattan, the Bronx, Brooklyn, Queens, and Staten Island”¹

A grayscale image of a hand holding a smartphone. The phone's screen displays a technical chart, possibly a candlestick or bar chart, with various data points and labels. Overlaid on the center of the image is the text 'SIMPLIFY CHARTS BY ELIMINATING NOISE' in a bold, black, serif font. The background is a light, textured gray.

**SIMPLIFY CHARTS BY
ELIMINATING NOISE**

WHAT IS NOISE?

Anything in a visualization, report, or dashboard that does not help
tell the data story



NOISE CAN BE...

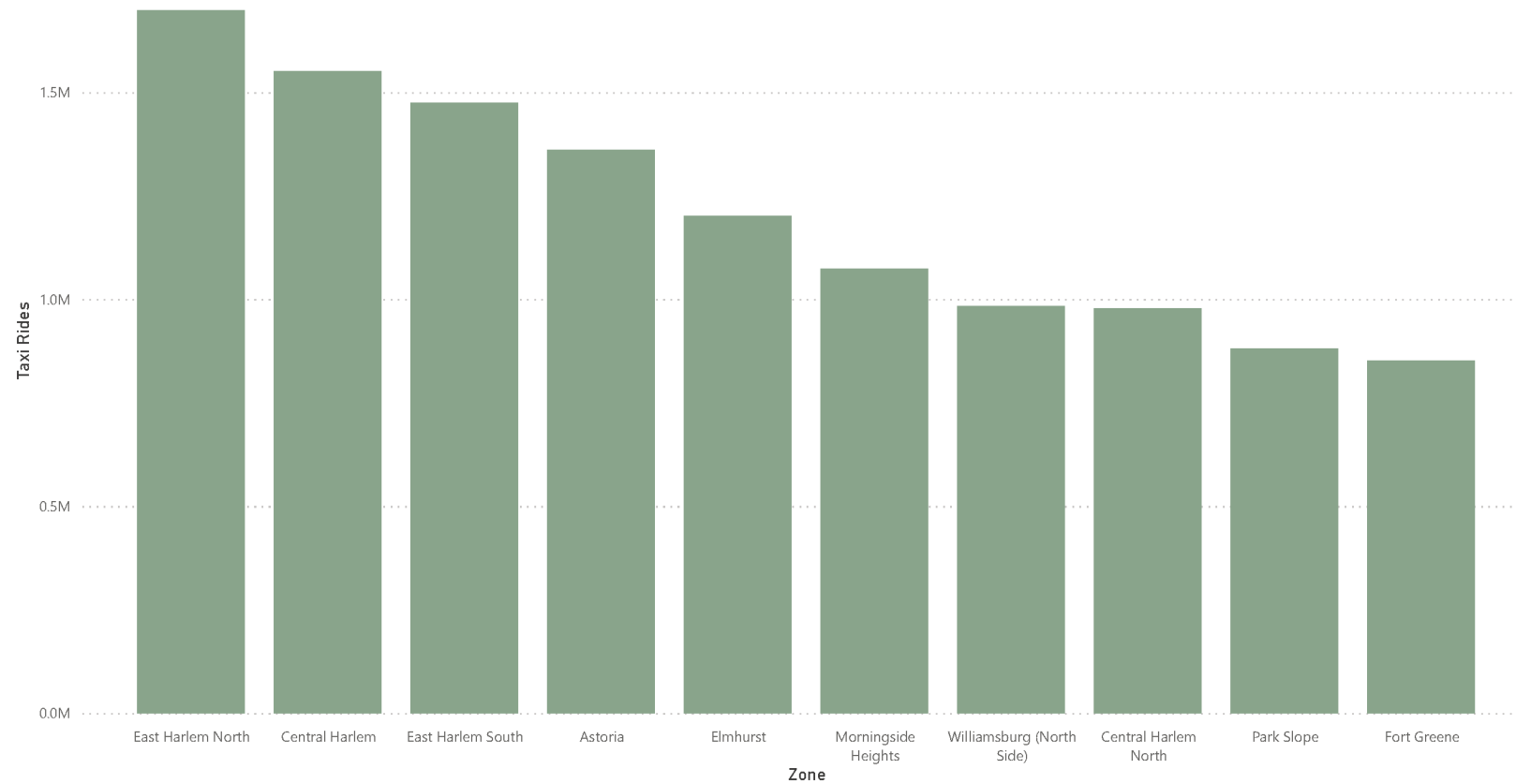
- Ambiguous, unclear titles
- Gridlines
- Dividers
- Borders or boxes
- Lack of whitespace
- Overcrowded data labels
- Too many data points



EXAMPLE 1

How many pickups were made in the top 10 green taxi zones?

Taxi Rides by Zone

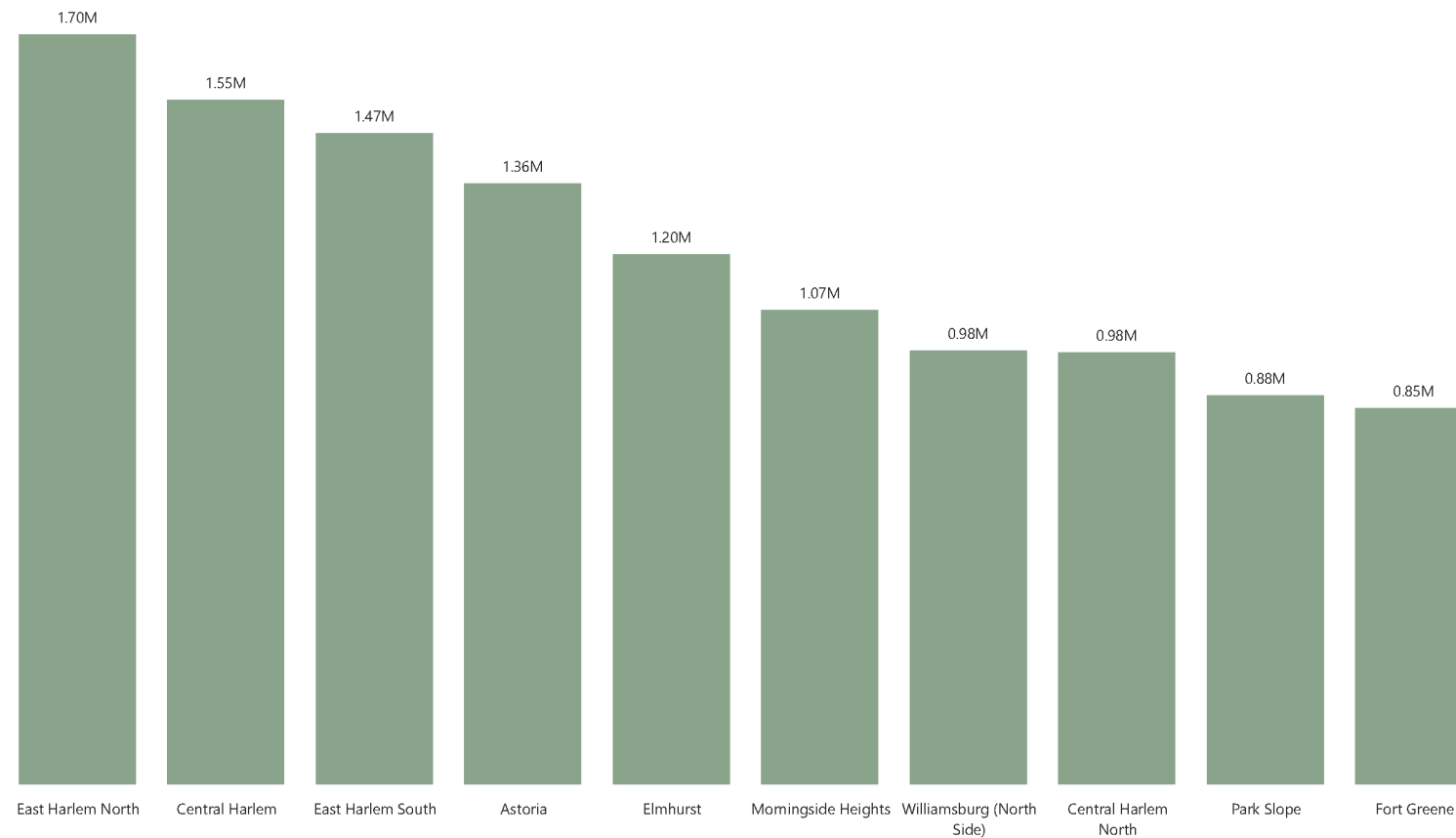




EXAMPLE 1

How many pickups were made in the top 10 green taxi zones?

Number of Pickups in the Top Ten Green Taxi Zones



A large, high-resolution, close-up photograph of a human eye, looking directly at the camera. The eye is the central focus, with long, dark eyelashes visible on both the upper and lower lids. The iris is a light, hazy color, and the pupil is visible in the center. The background is a soft, out-of-focus light gray.

GESTALT'S PRINCIPLES OF PERCEPTION

WHAT IS GESTALT?



School of
Psychology
and
Theory of
Perception



Founded in
early 20th
century by
German
psychologists
Max
Wertheimer
Kurt Koffka
Wolfgang
Köhler



Shape
Form
Pattern
Configuration



The whole is
greater than
the sum of its
parts



GESTALT PRINCIPLES - LAW OF...

Emergence

Closure

Common Region

Continuity or Continuation

Proximity

Multistability

Connectedness

Figure / Ground

Invariance

Prägnanz

Similarity

Symmetry and Order

Common Fate



GESTALT PRINCIPLES - LAW OF...

Emergence

Closure

Common Region

Continuity or Continuation

Proximity

Multistability

Connectedness

Figure / Ground

Invariance

Prägnanz

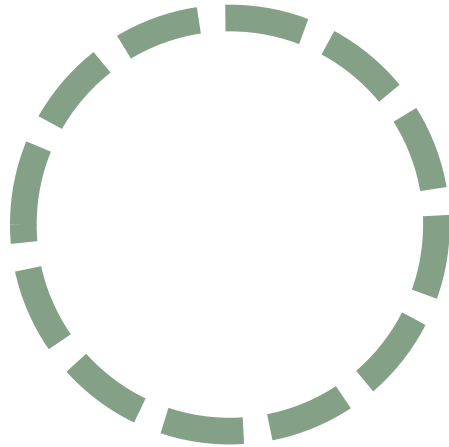
Similarity

Symmetry and Order

Common Fate

LAW OF CLOSURE

Objects that are incomplete are perceived as complete



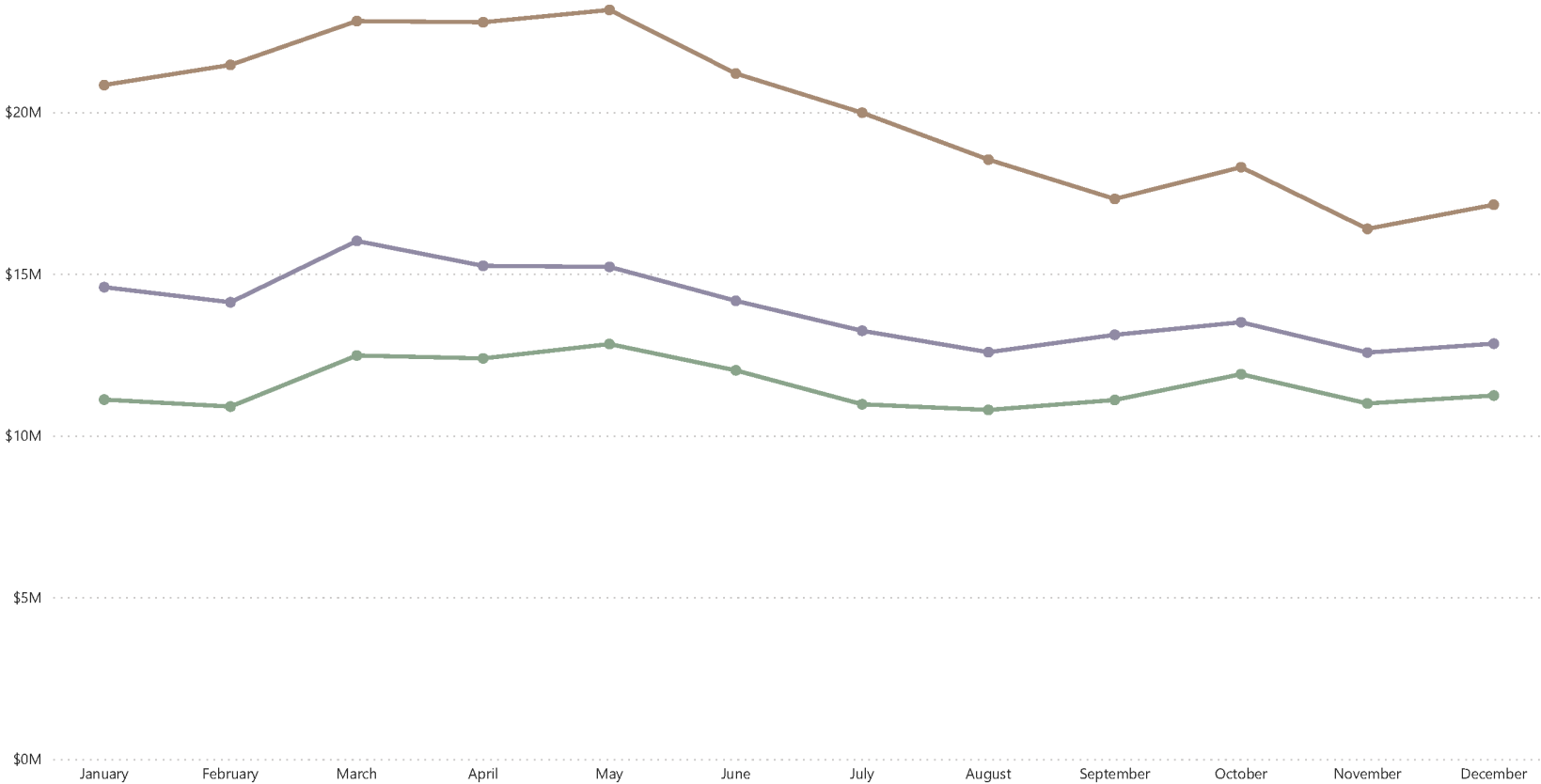


EXAMPLE 2

The Law of Closure in action

YoY Total Fare Trends

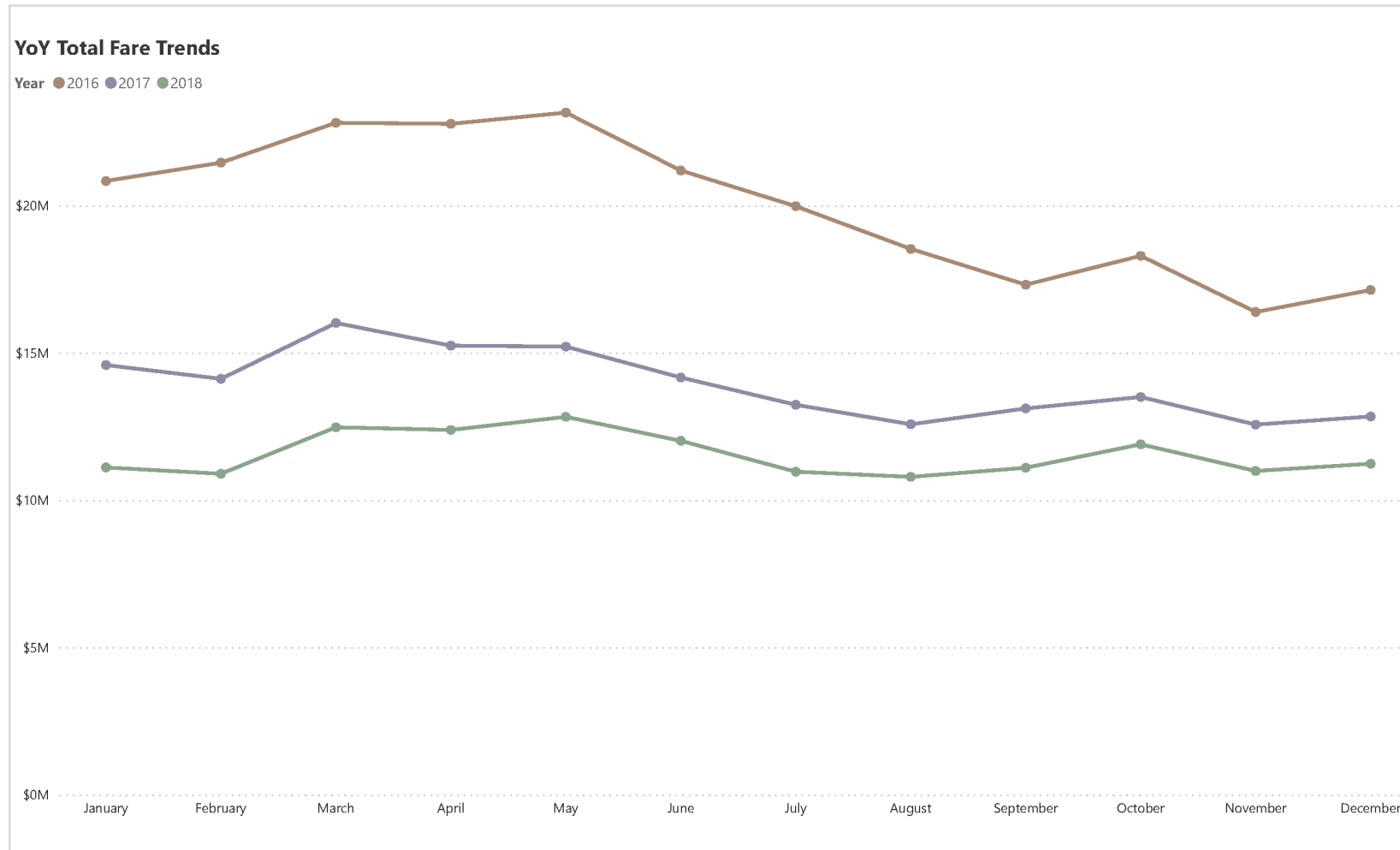
Year 2016 2017 2018





EXAMPLE 2

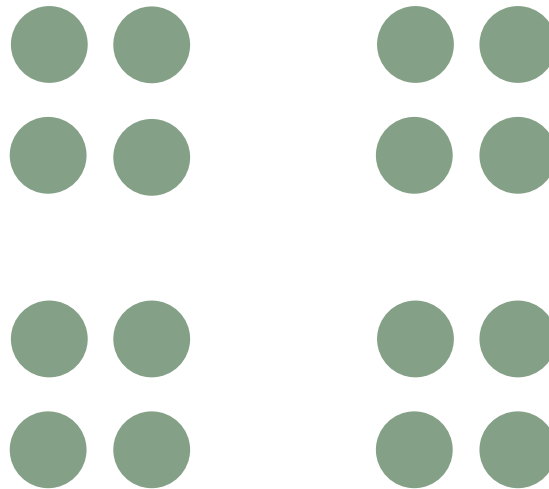
The Law of Closure in action





LAW OF PROXIMITY

Objects that appear close together tend to be grouped together



EXAMPLE 3

The Law of Proximity in action

| Date | Pickup Time | Dropoff Time | Trip Type | Pickup Borough | Pickup Zone | Dropoff Borough | Dropoff Zone | Passengers | Trip Distance | Total Fare Amount |
|-----------------------|-------------|--------------|-------------|----------------|-------------------------|-----------------|-------------------------------------|------------|---------------|-------------------|
| Friday, June 01, 2018 | 12:34:23 PM | 1:16:06 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | East Concourse/Concourse Village | 1 | 6.95 | \$31.30 |
| Friday, June 01, 2018 | 12:02:18 PM | 12:16:53 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | East Tremont | 1 | 2.68 | \$13.30 |
| Friday, June 01, 2018 | 8:15:29 PM | 8:32:30 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Morrisania/Melrose | 1 | 6.37 | \$21.80 |
| Friday, June 01, 2018 | 11:41:02 PM | 11:56:34 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Mount Hope | 1 | 3.78 | \$15.30 |
| Friday, June 01, 2018 | 6:11:20 PM | 6:57:01 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Riverdale/North Riverdale/Fieldston | 1 | 5.90 | \$38.29 |
| Friday, June 01, 2018 | 5:47:03 PM | 6:25:37 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Spuyten Duyvil/Kingsbridge | 5 | 8.48 | \$33.80 |
| Friday, June 01, 2018 | 8:50:21 AM | 9:07:20 AM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Van Cortlandt Village | 1 | 3.31 | \$19.71 |
| Friday, June 01, 2018 | 11:36:35 AM | 12:07:22 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | West Concourse | 1 | 6.77 | \$26.30 |
| Friday, June 01, 2018 | 12:36:24 PM | 12:51:04 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Westchester Village/Unionport | 1 | 2.57 | \$13.30 |
| Friday, June 01, 2018 | 1:52:23 PM | 2:13:31 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Westchester Village/Unionport | 1 | 3.93 | \$18.30 |
| Friday, June 01, 2018 | 3:03:10 PM | 3:21:24 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Williamsbridge/Olinville | 1 | 2.64 | \$14.30 |
| Friday, June 01, 2018 | 12:42:03 PM | 12:55:28 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Woodlawn/Wakefield | 1 | 2.90 | \$12.80 |
| Friday, June 01, 2018 | 5:29:18 PM | 5:39:21 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Woodlawn/Wakefield | 1 | 1.34 | \$10.30 |
| Friday, June 01, 2018 | 8:20:43 PM | 8:34:03 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Woodlawn/Wakefield | 1 | 2.58 | \$12.30 |
| Friday, June 01, 2018 | 11:07:07 PM | 11:26:24 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Manhattan | Central Harlem North | 1 | 9.72 | \$29.30 |
| Friday, June 01, 2018 | 11:09:10 AM | 11:46:01 AM | Street-hail | Bronx | Allerton/Pelham Gardens | Manhattan | East Harlem North | 1 | 9.12 | \$31.80 |
| Friday, June 01, 2018 | 3:37:02 PM | 4:35:42 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Manhattan | Midtown Center | 1 | 12.68 | \$51.06 |
| Friday, June 01, 2018 | 11:50:17 AM | 12:58:10 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Manhattan | Upper East Side South | 1 | 14.82 | \$53.80 |
| Friday, June 01, 2018 | 12:36:50 PM | 1:29:15 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Manhattan | Washington Heights South | 1 | 8.29 | \$36.30 |
| Friday, June 01, 2018 | 4:27:15 PM | 5:20:24 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Queens | Elmhurst | 1 | 10.45 | \$49.56 |
| Friday, June 01, 2018 | 4:27:21 AM | 4:43:31 AM | Dispatch | Bronx | Bedford Park | Bronx | East Concourse/Concourse Village | 1 | 3.10 | \$0.00 |
| Friday, June 01, 2018 | 10:08:03 PM | 10:21:18 PM | Dispatch | Bronx | Bedford Park | Bronx | Soundview/Bruckner | 1 | 3.90 | \$0.00 |
| Friday, June 01, 2018 | 5:08:32 AM | 5:37:19 AM | Dispatch | Bronx | Bedford Park | Bronx | Williamsbridge/Olinville | 1 | 5.20 | \$0.00 |
| Friday, June 01, 2018 | 2:17:23 AM | 3:01:25 AM | Dispatch | Bronx | Bedford Park | Manhattan | Bloomingdale | 2 | 16.50 | \$0.00 |
| Friday, June 01, 2018 | 2:19:54 PM | 2:26:14 PM | Street-hail | Bronx | Bedford Park | Bronx | Bedford Park | 1 | 0.66 | \$6.30 |
| Friday, June 01, 2018 | 3:46:29 PM | 3:50:29 PM | Street-hail | Bronx | Bedford Park | Bronx | Bedford Park | 1 | 2.13 | \$12.80 |
| Friday, June 01, 2018 | 6:28:04 PM | 6:28:22 PM | Street-hail | Bronx | Bedford Park | Bronx | Bedford Park | 1 | 0.02 | \$4.30 |
| Friday, June 01, 2018 | 11:46:15 PM | 11:52:00 PM | Street-hail | Bronx | Bedford Park | Bronx | Bedford Park | 1 | 0.85 | \$6.80 |
| Friday, June 01, 2018 | 8:55:47 AM | 9:05:23 AM | Street-hail | Bronx | Bedford Park | Bronx | Belmont | 1 | 1.10 | \$8.80 |
| Friday, June 01, 2018 | 5:30:02 PM | 5:35:59 PM | Street-hail | Bronx | Bedford Park | Bronx | Belmont | 5 | 0.69 | \$7.30 |
| Friday, June 01, 2018 | 7:01:06 PM | 7:13:27 PM | Street-hail | Bronx | Bedford Park | Bronx | Belmont | 1 | 1.38 | \$10.30 |
| Friday, June 01, 2018 | 1:52:30 PM | 2:07:42 PM | Street-hail | Bronx | Bedford Park | Bronx | Bronxdale | 1 | 2.48 | \$12.80 |
| Friday, June 01, 2018 | 12:08:29 PM | 12:22:13 PM | Street-hail | Bronx | Bedford Park | Bronx | Claremont/Bathgate | 1 | 2.34 | \$12.30 |
| Friday, June 01, 2018 | 1:36:00 PM | 1:52:56 PM | Street-hail | Bronx | Bedford Park | Bronx | Claremont/Bathgate | 1 | 2.50 | \$13.80 |



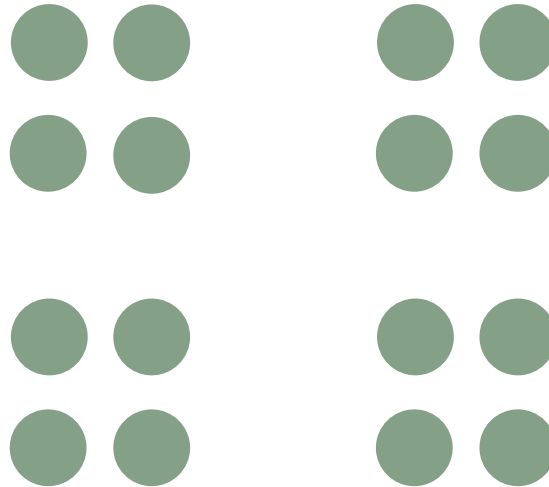
EXAMPLE 3

The Law of Proximity at use in Table visuals

| Date | Pickup Time | Dropoff Time | Trip Type | Pickup Borough | Pickup Zone | Dropoff Borough | Dropoff Zone | Passengers | Trip Distance | Total Fare |
|-----------------------|-------------|--------------|-------------|----------------|-------------------------|-----------------|-------------------------------------|------------|---------------|------------|
| Friday, June 01, 2018 | 12:34:23 PM | 1:16:06 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | East Concourse/Concourse Village | 1 | 6.95 | |
| Friday, June 01, 2018 | 12:02:18 PM | 12:16:53 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | East Tremont | 1 | 2.68 | |
| Friday, June 01, 2018 | 8:15:29 PM | 8:32:30 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Morrisania/Melrose | 1 | 6.37 | |
| Friday, June 01, 2018 | 11:41:02 PM | 11:56:34 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Mount Hope | 1 | 3.78 | |
| Friday, June 01, 2018 | 6:11:20 PM | 6:57:01 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Riverdale/North Riverdale/Fieldston | 1 | 5.90 | |
| Friday, June 01, 2018 | 5:47:03 PM | 6:25:37 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Spuyten Duyvil/Kingsbridge | 5 | 8.48 | |
| Friday, June 01, 2018 | 8:50:21 AM | 9:07:20 AM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Van Cortlandt Village | 1 | 3.31 | |
| Friday, June 01, 2018 | 11:36:35 AM | 12:07:22 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | West Concourse | 1 | 6.77 | |
| Friday, June 01, 2018 | 12:36:24 PM | 12:51:04 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Westchester Village/Unionport | 1 | 2.57 | |
| Friday, June 01, 2018 | 1:52:23 PM | 2:13:31 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Westchester Village/Unionport | 1 | 3.93 | |
| Friday, June 01, 2018 | 3:03:10 PM | 3:21:24 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Williamsbridge/Olinville | 1 | 2.64 | |
| Friday, June 01, 2018 | 12:42:03 PM | 12:55:28 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Woodlawn/Wakefield | 1 | 2.90 | |
| Friday, June 01, 2018 | 5:29:18 PM | 5:39:21 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Woodlawn/Wakefield | 1 | 1.34 | |
| Friday, June 01, 2018 | 8:20:43 PM | 8:34:03 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Bronx | Woodlawn/Wakefield | 1 | 2.58 | |
| Friday, June 01, 2018 | 11:07:07 PM | 11:26:24 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Manhattan | Central Harlem North | 1 | 9.72 | |
| Friday, June 01, 2018 | 11:09:10 AM | 11:46:01 AM | Street-hail | Bronx | Allerton/Pelham Gardens | Manhattan | East Harlem North | 1 | 9.12 | |
| Friday, June 01, 2018 | 3:37:02 PM | 4:35:42 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Manhattan | Midtown Center | 1 | 12.68 | |
| Friday, June 01, 2018 | 11:50:17 AM | 12:58:10 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Manhattan | Upper East Side South | 1 | 14.82 | |
| Friday, June 01, 2018 | 12:36:50 PM | 1:29:15 PM | Street-hail | Bronx | Allerton/Pelham Gardens | Manhattan | Washington Heights South | 1 | 8.29 | |

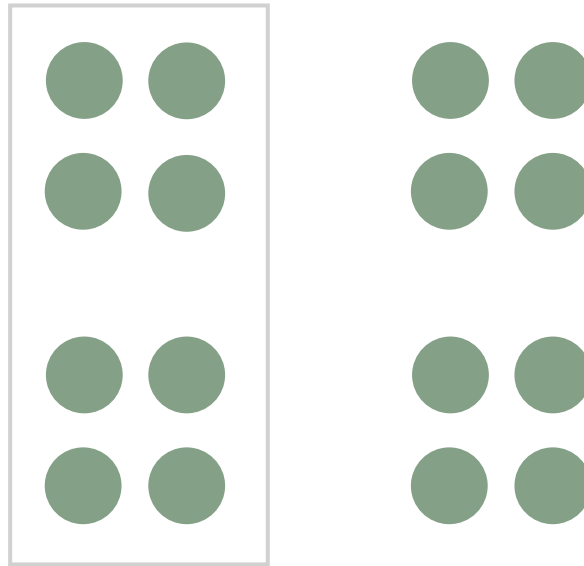
LAW OF COMMON REGION

Objects enclosed in the same region are perceived as a group



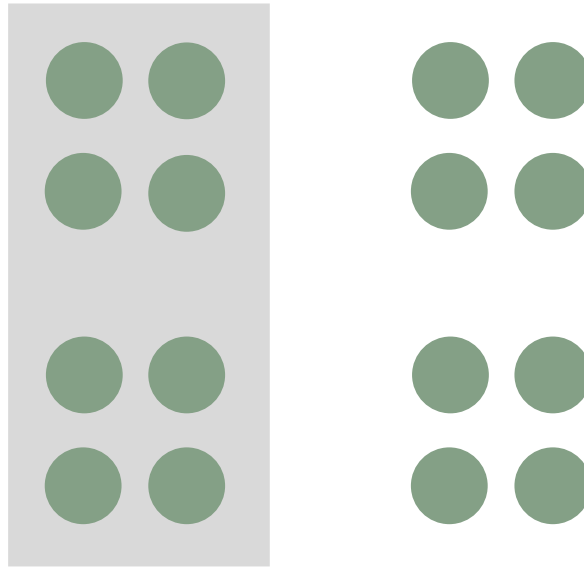
LAW OF COMMON REGION

Objects enclosed in the same region are perceived as a group



LAW OF COMMON REGION

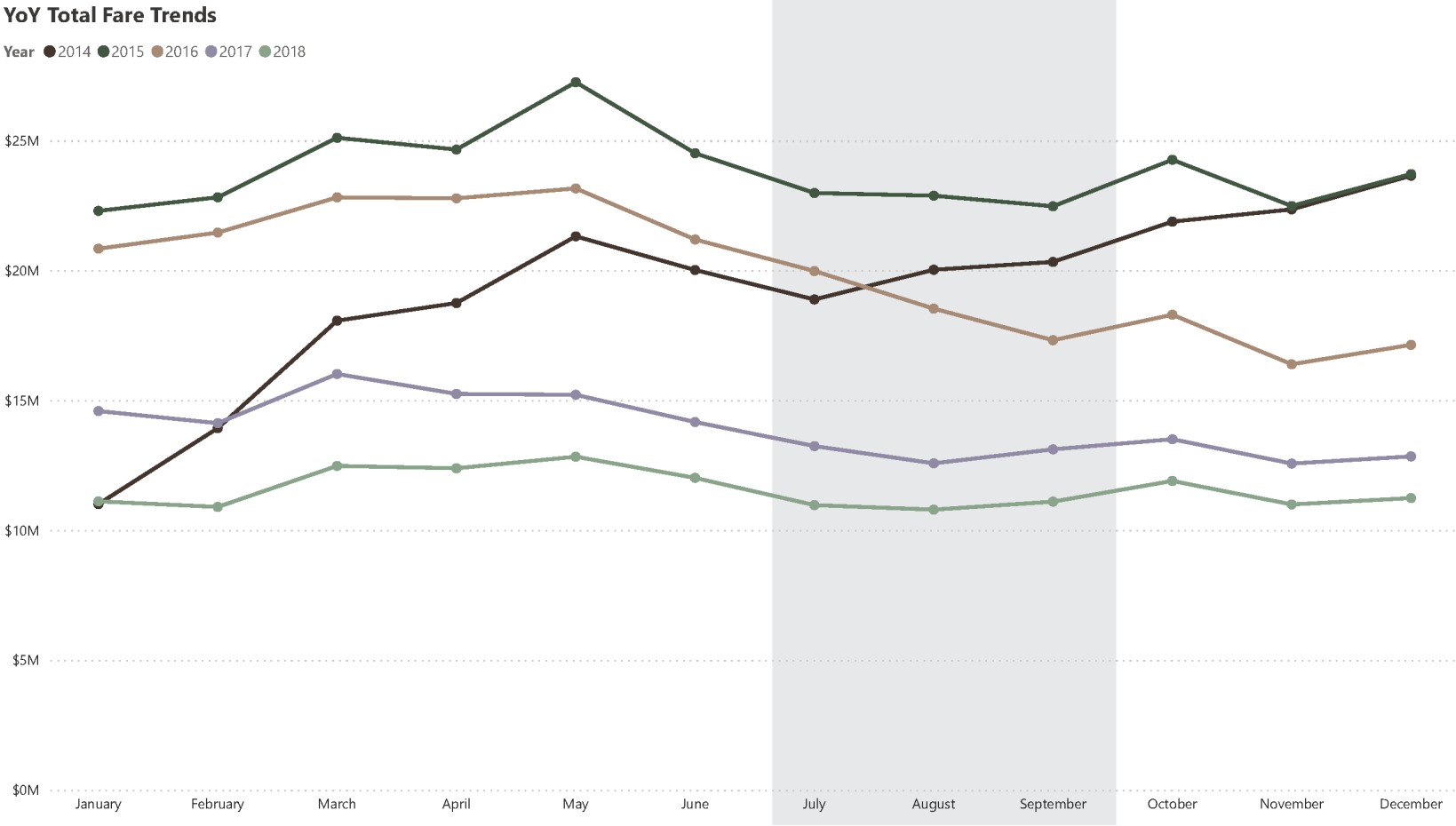
Objects enclosed in the same region are perceived as a group





EXAMPLE 3

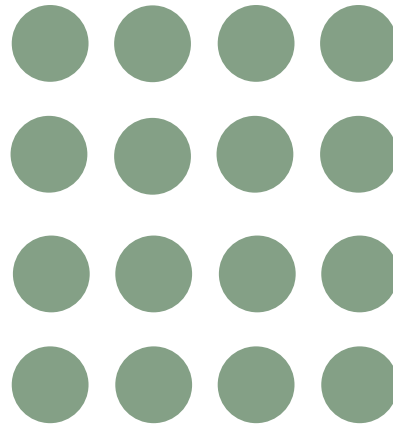
The Law of Common Region in action





LAW OF SIMILARITY

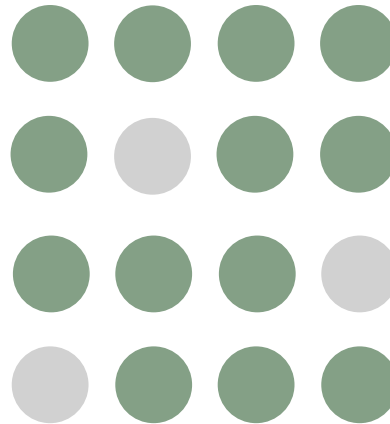
Objects that appear similar in color, shape, size, or orientation tend to be grouped together, even if the objects are separated





LAW OF SIMILARITY

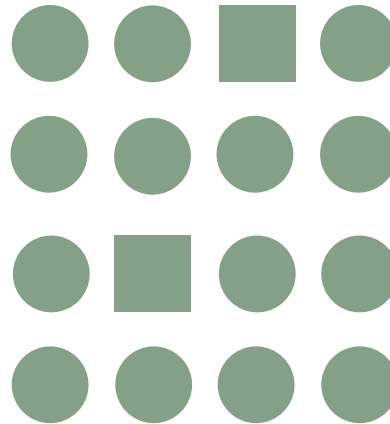
Objects that appear similar in color, shape, size, or orientation tend to be grouped together, even if the objects are separated





LAW OF SIMILARITY

Objects that appear similar in color, shape, size, or orientation tend to be grouped together, even if the objects are separated



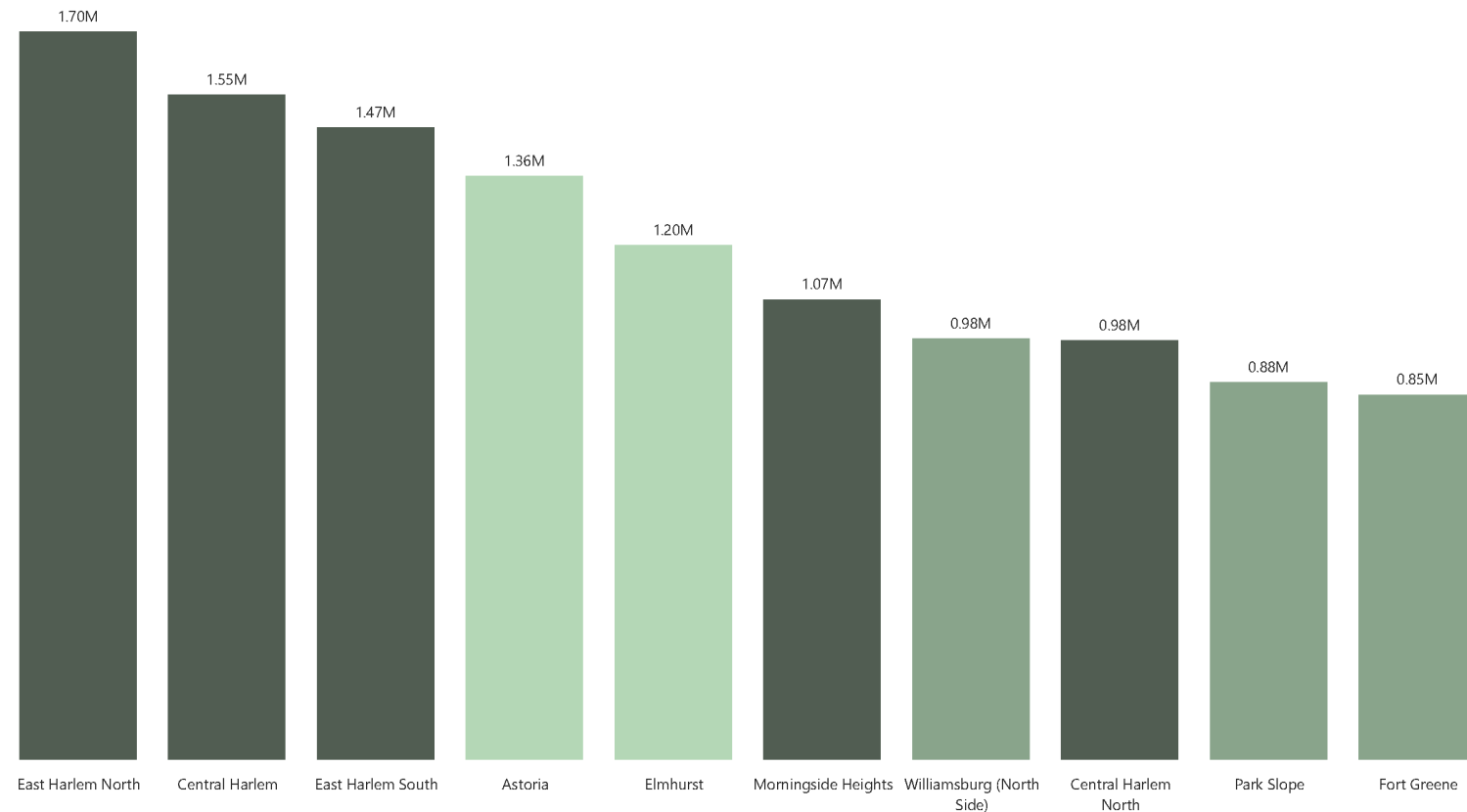


EXAMPLE 4

The Law of Similarity in action

Number of Pickups in the Top Ten Green Taxi Zones

Borough ● Brooklyn ● Manhattan ● Queens



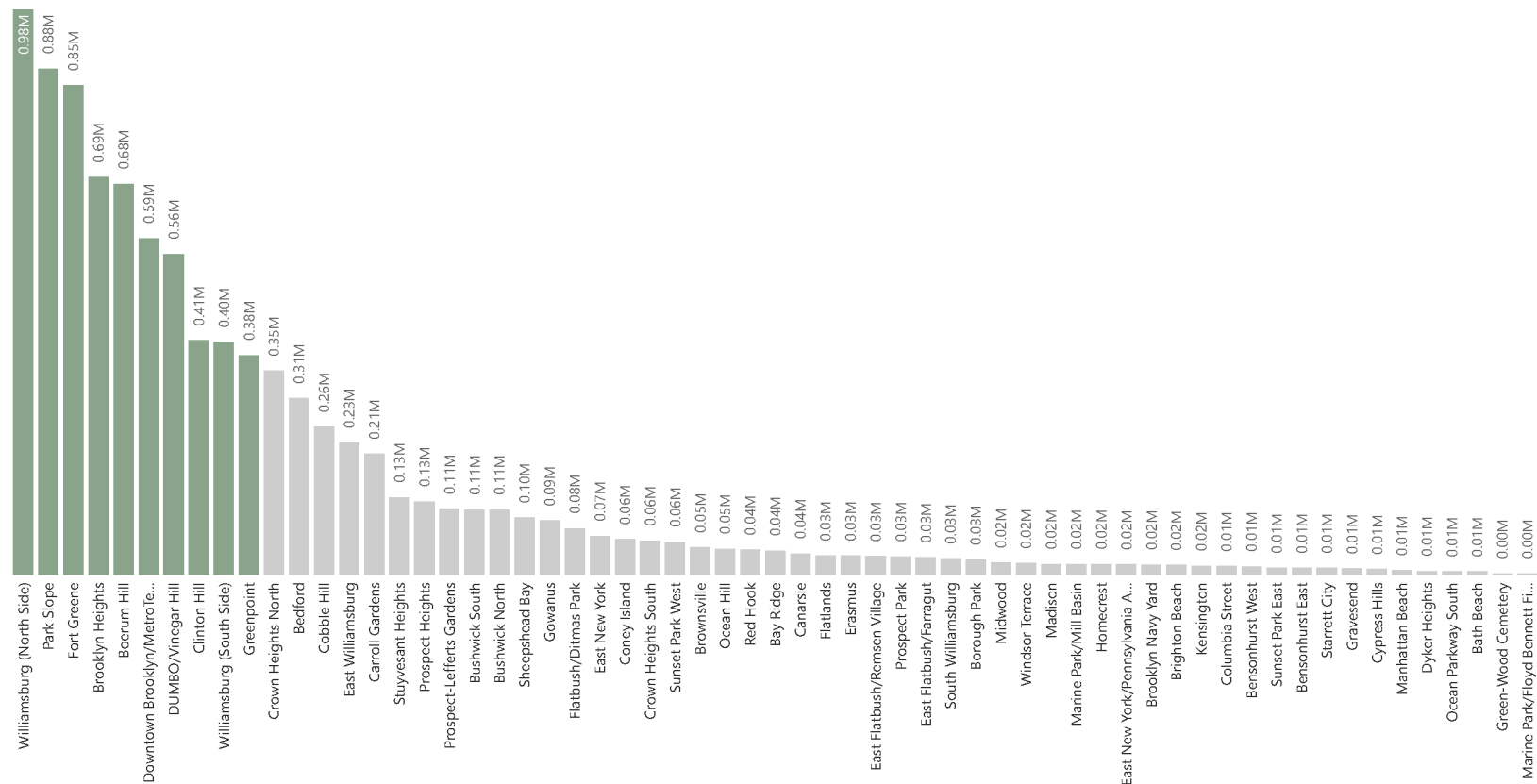


EXAMPLE 5

The Law of Similarity in action

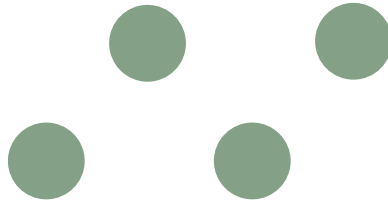
Number of Taxi Pickups in Brooklyn

Top 10 Taxi Zones highlighted in green



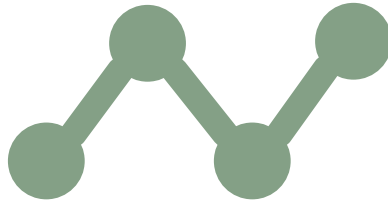
LAW OF CONNECTEDNESS

Objects that connected physically connected are part of a group



LAW OF CONNECTEDNESS

Objects that connected physically connected are part of a group

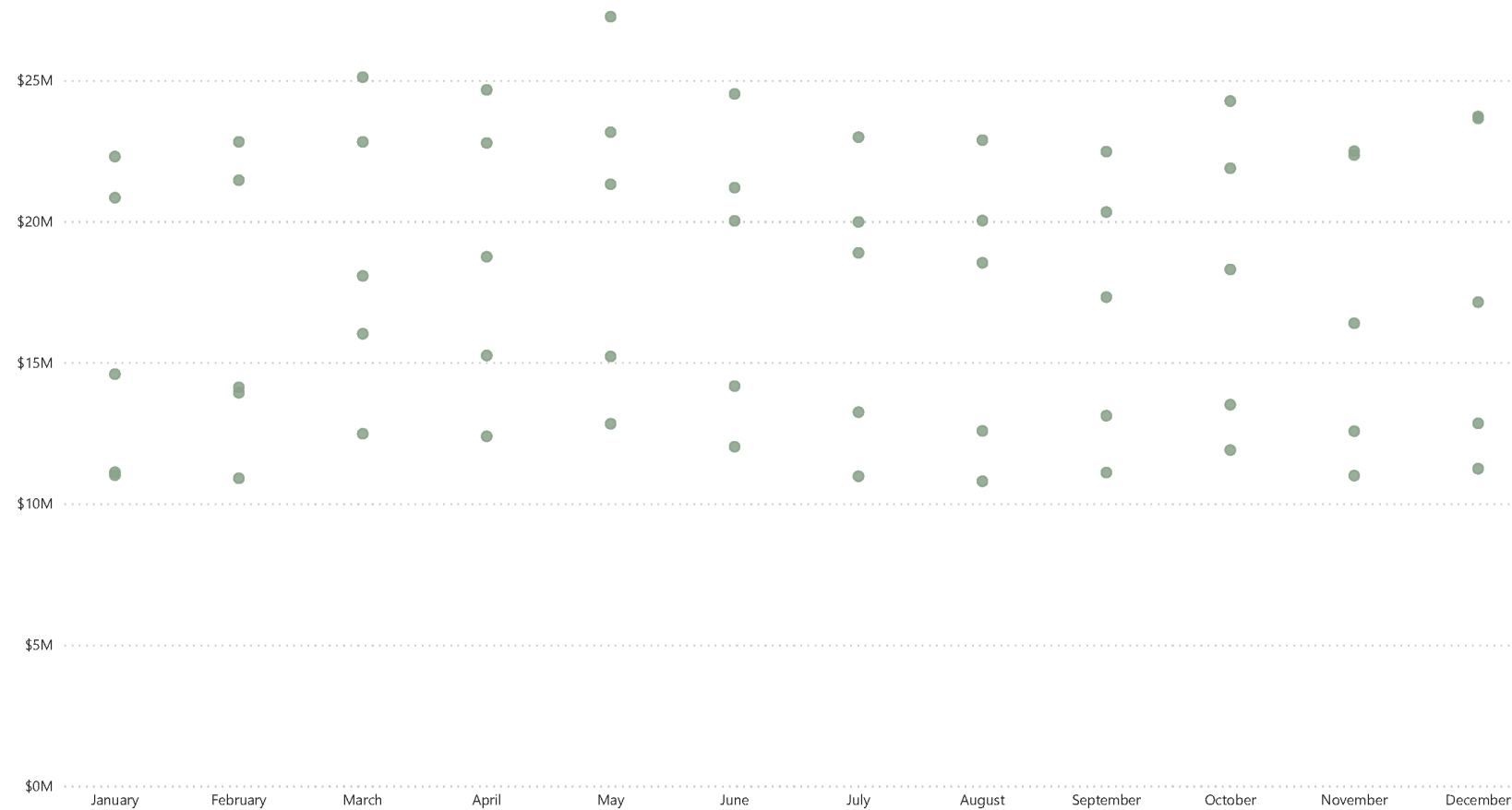




EXAMPLE 6

The Law of Connectedness in action

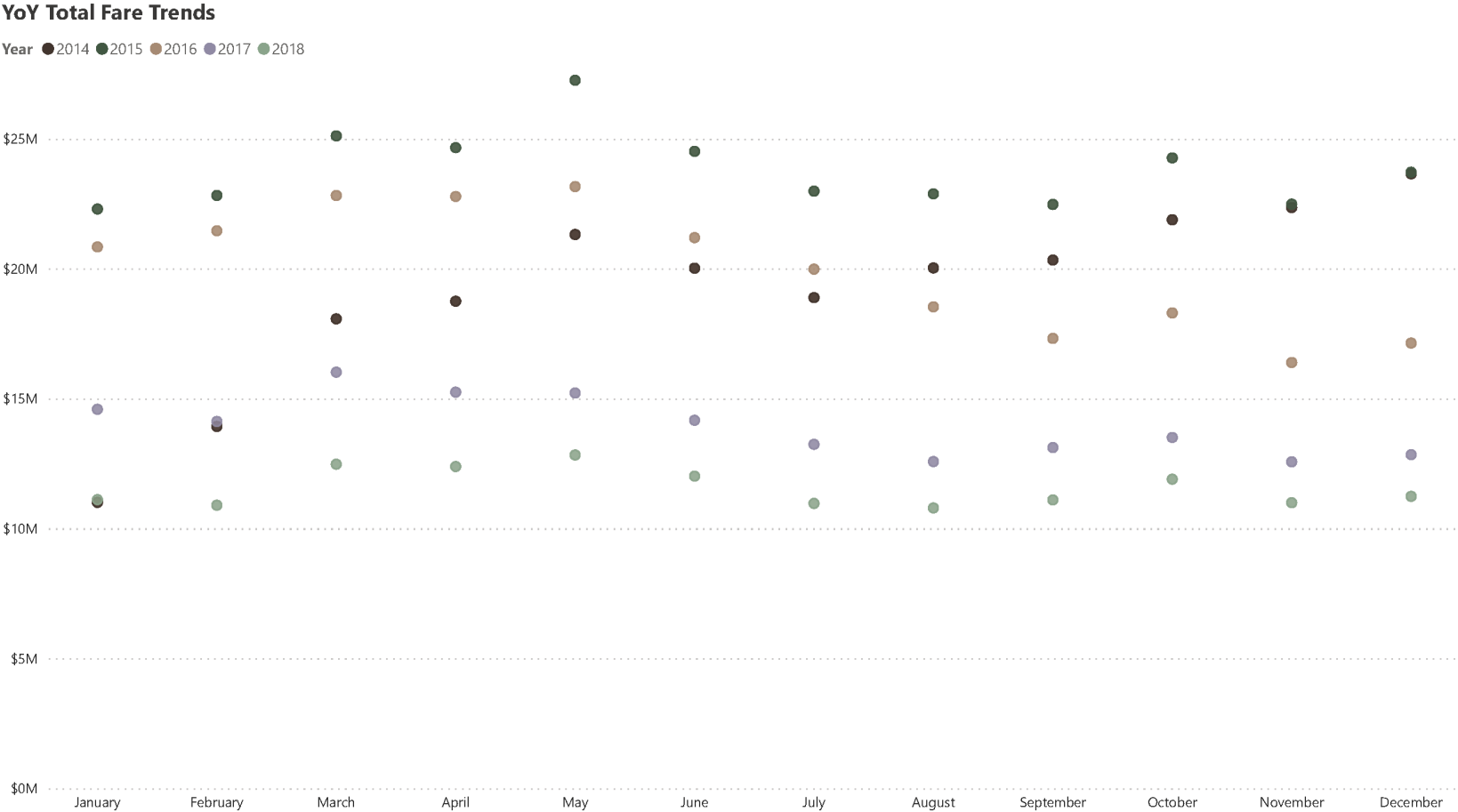
YoY Total Fare Trends





EXAMPLE 6

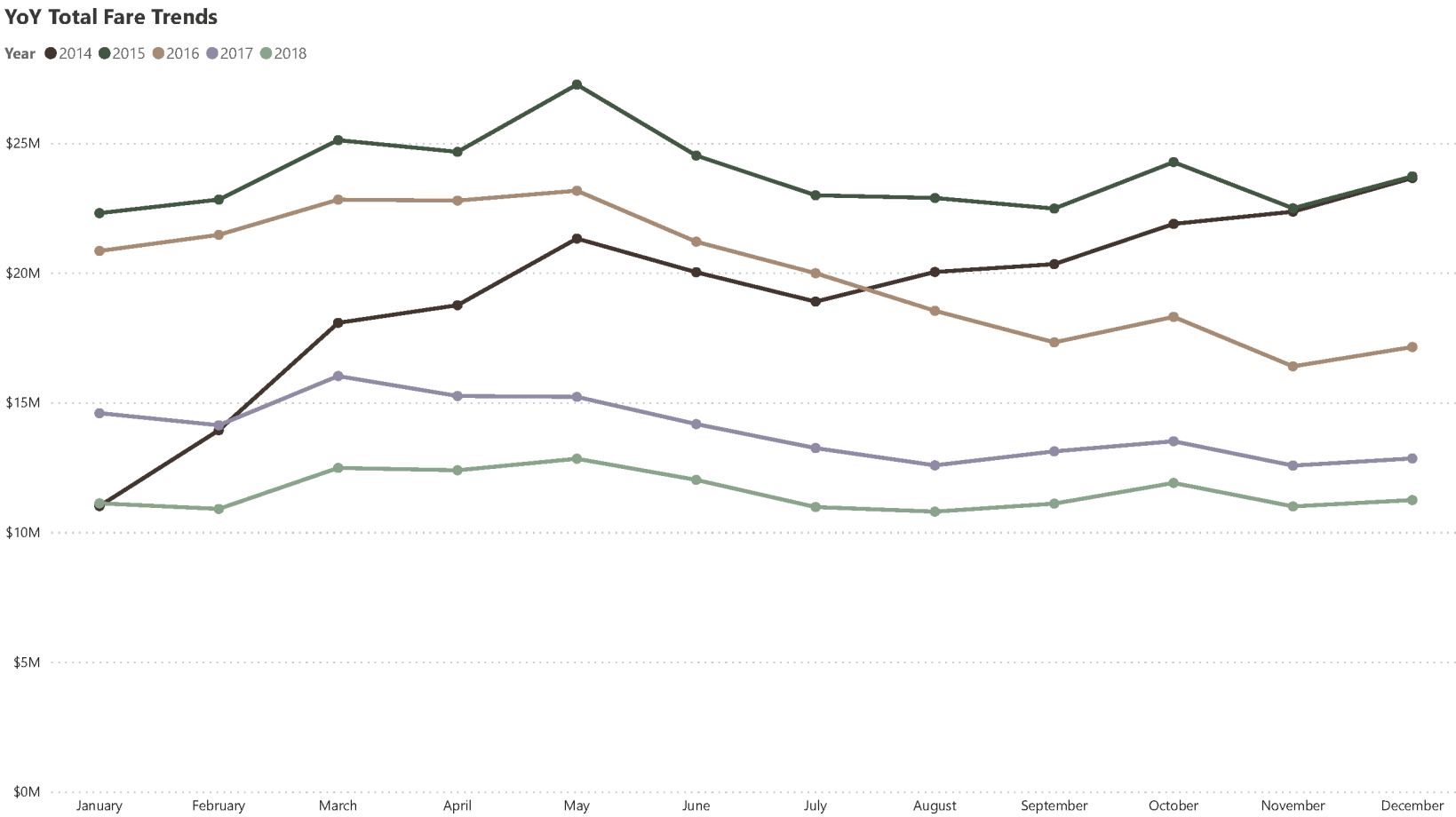
The Law of Connectedness in action





EXAMPLE 6

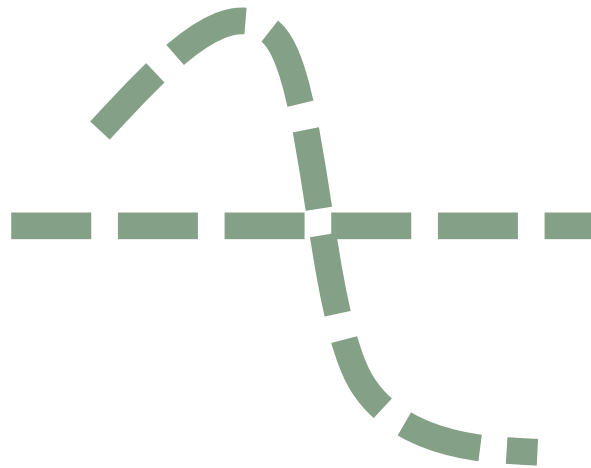
The Law of Connectedness in action





LAW OF CONTINUITY OR CONTINUATION

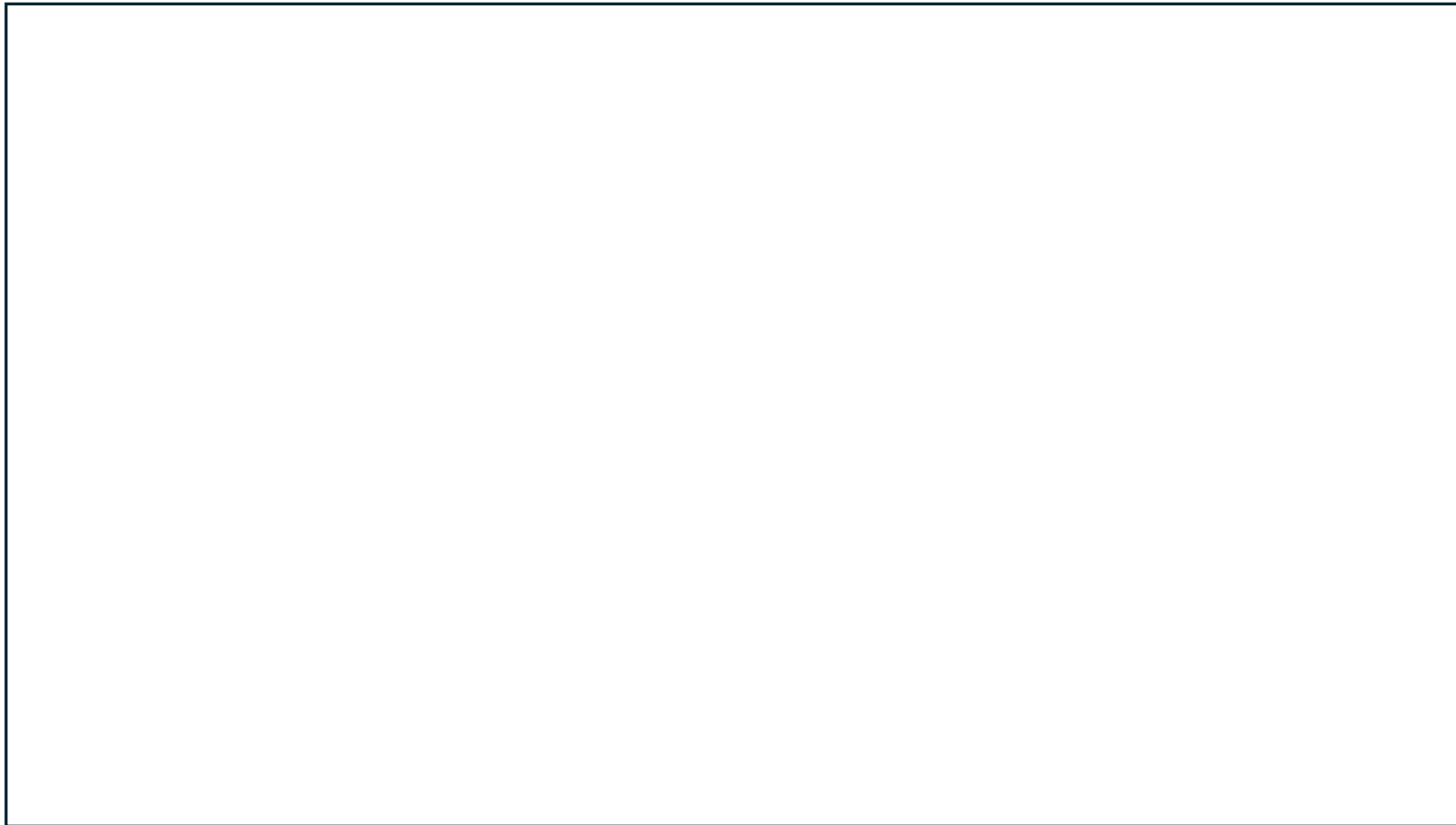
Objects that appear on a simple, continuous path appear to follow the path in that direction



REPORT PAGE LAYOUTS

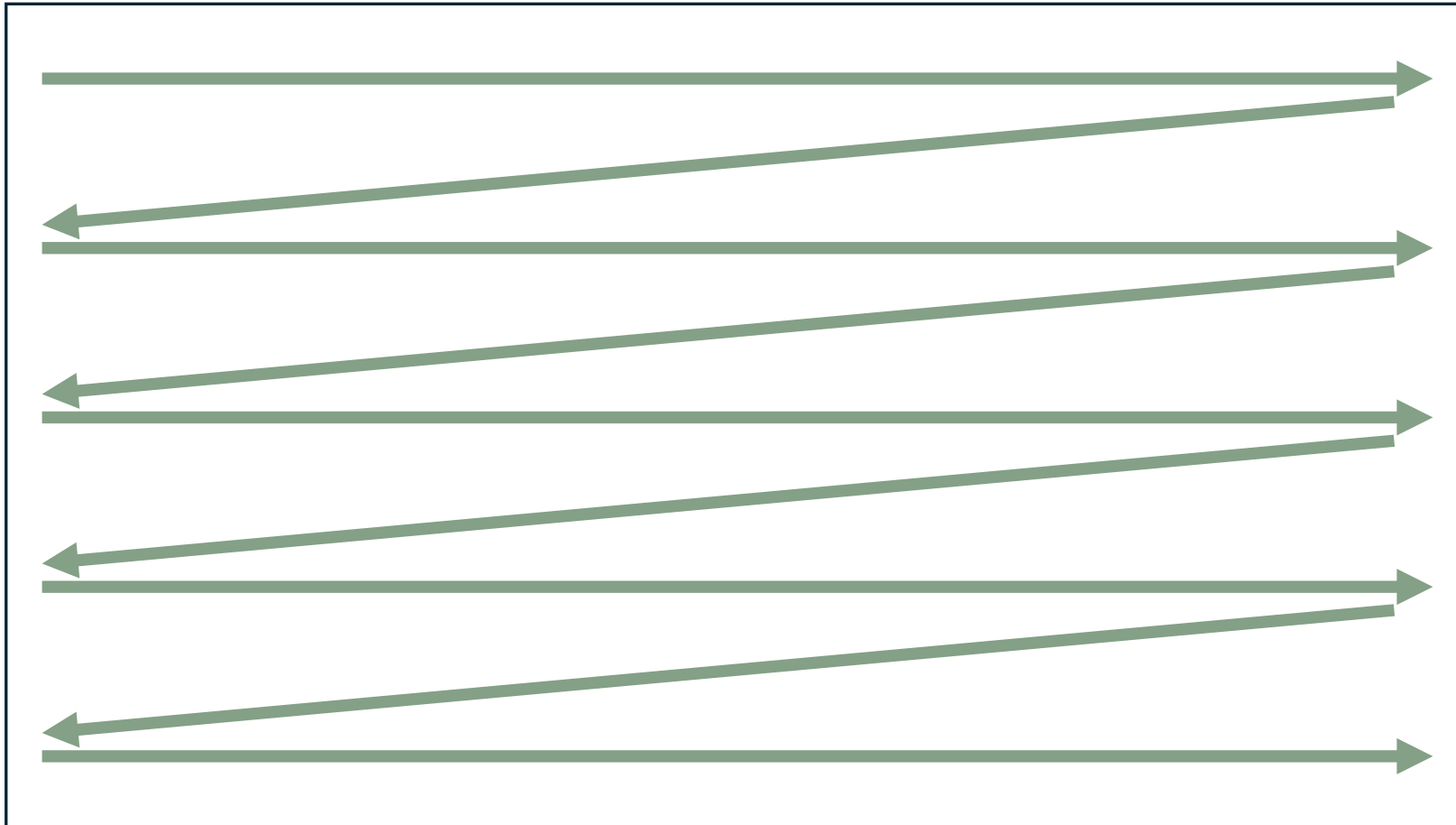


TOP TO BOTTOM, LEFT TO RIGHT



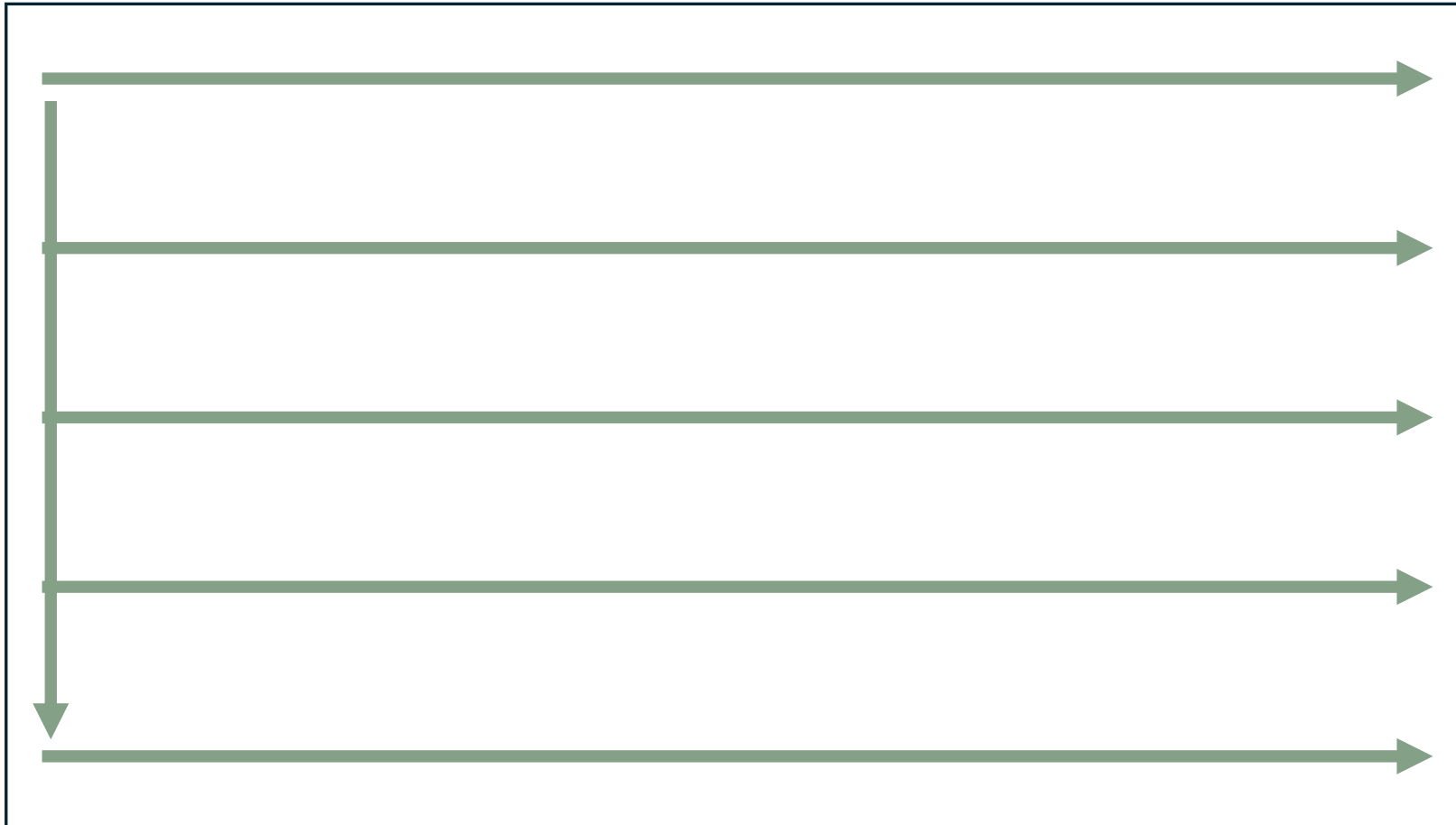


TOP TO BOTTOM, LEFT TO RIGHT





TOP TO BOTTOM, LEFT TO RIGHT





TOP TO BOTTOM, LEFT TO RIGHT

Most Important Information

Least Important Information



NYC GREEN TAXI OPERATIONS DASHBOARD

- Customers are opting for Uber or Lyft instead of taking a taxi
- Operational changes will be implemented to make getting a taxi more convenient for customers
- Monitor key metrics versus previous month and previous year
 - Taxi ride counts
 - Average trip distance
 - Average trip duration
- See popular pickup and drop off zones. Where are more taxis needed?
- When are people using taxis most often?
- Are people using taxis to ride alone or with others?
- Users need the ability to interact with visuals as filters – best presentation format is dashboarding tool, i.e. Power BI, Tableau, Looker
- Chart types have already been chosen



| |
|----------------|
| Taxi Rides YTD |
| 1,080,798 |
| ▼ -24.1% YoY |

| |
|-----------------------|
| Avg Trip Distance YTD |
| 2.66 |
| ▲ 3.8% YoY |

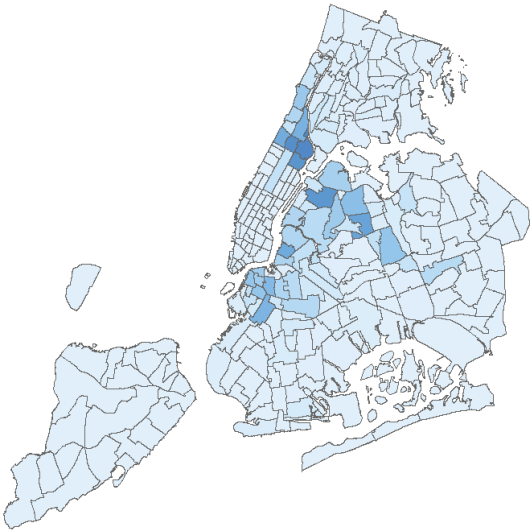
| |
|-----------------------------------|
| Avg Trip Duration YTD (Formatted) |
| 00:12:56 |
| ▲ 00:00:52 YoY |

| |
|----------------|
| Taxi Rides MTD |
| 287,287 |
| ▲ 22.9% MoM |

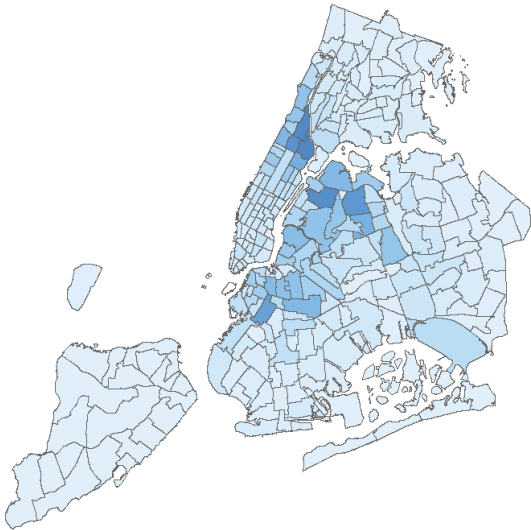
| |
|-----------------------|
| Avg Trip Distance MTD |
| 2.66 |
| ▲ 1.1% MoM |

| |
|-----------------------------------|
| Avg Trip Duration MTD (Formatted) |
| 00:12:53 |
| ▼ 00:00:10 MoM |

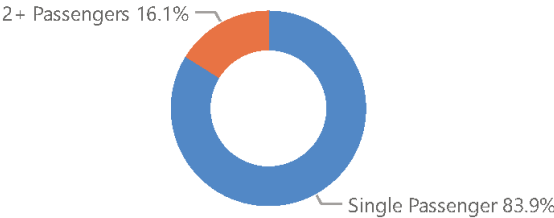
Taxi Rides by Zone



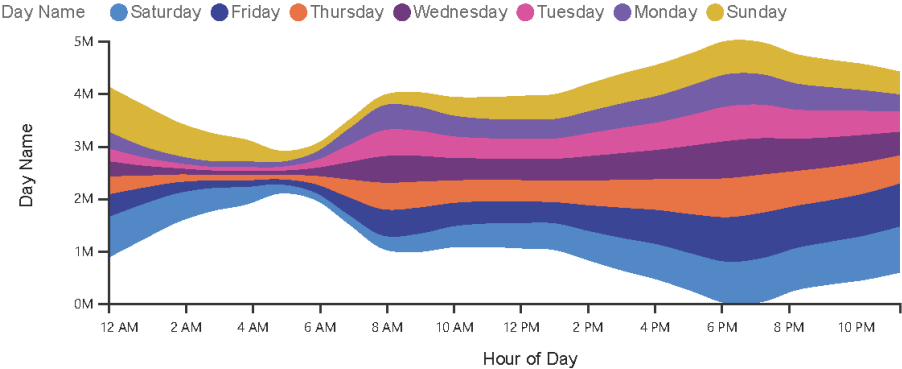
Taxi Rides by Zone



Taxi Rides by Rideshare



Taxi Rides by Hour of Day and Day Name





NYC Green Taxi Operations Dashboard

Last Data Refresh
02/10/2018

Taxi Rides

YTD

1,080,798

▼ -24.1% YoY

MTD

287,287

▲ 22.9% MoM

Pickup Zones

Dropoff Zones

Average Trip Distance

YTD

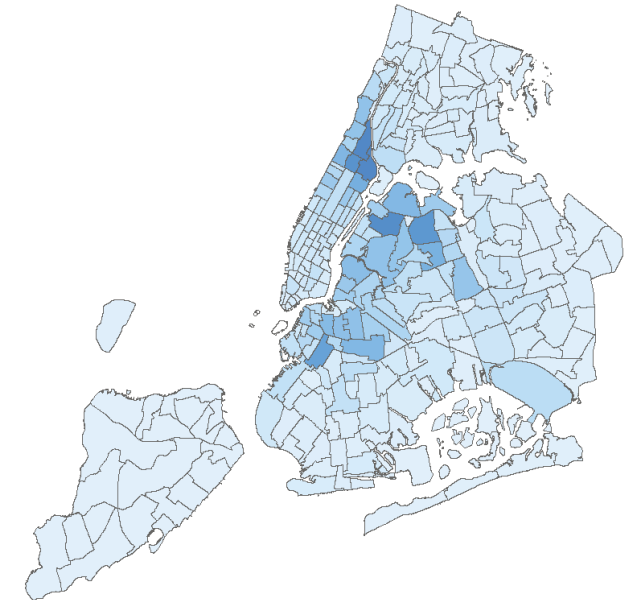
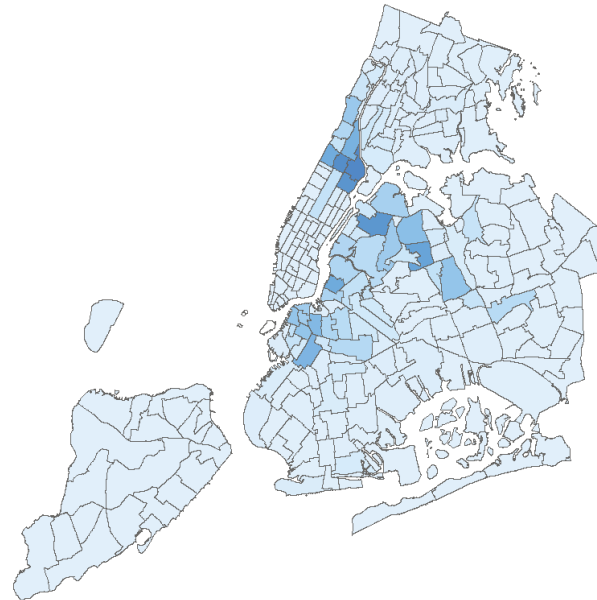
2.66

▲ 3.8% YoY

MTD

2.66

▲ 1.1% MoM



Average Trip Duration

YTD

00:12:56

▲ 00:00:52 YoY

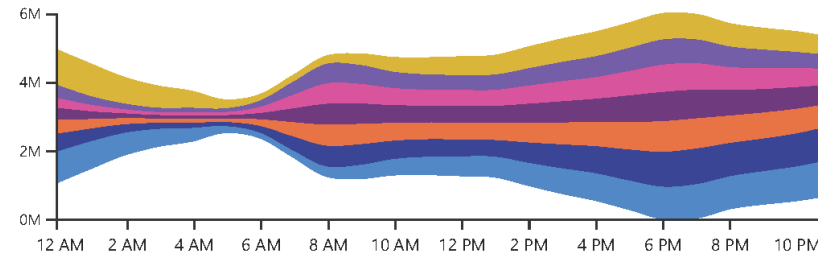
MTD

00:12:53

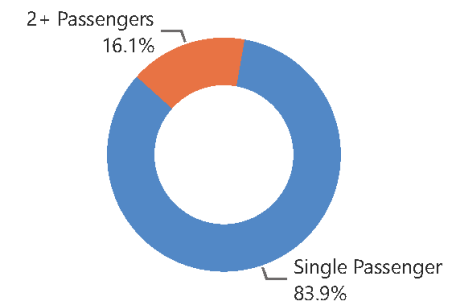
▼ 00:00:10 MoM

Taxi Rides by Hour of Day and Day Name

● Saturday ● Friday ● Thursday ● Wednesday ● Tuesday ● Monday ● Sunday



Taxi Rides by Rideshare





NYC Green Taxi Operations Dashboard

Last Data Refresh
02/10/2018

Taxi Rides

YTD

1,080,798

▼ -24.1% YoY

12 Month Trend

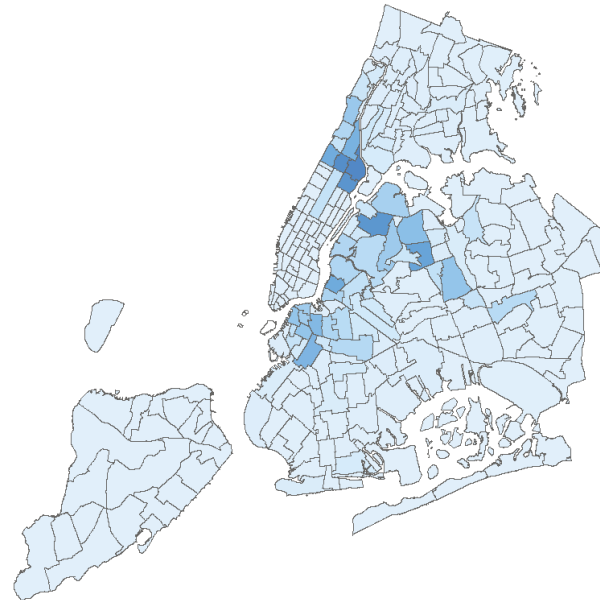


MTD

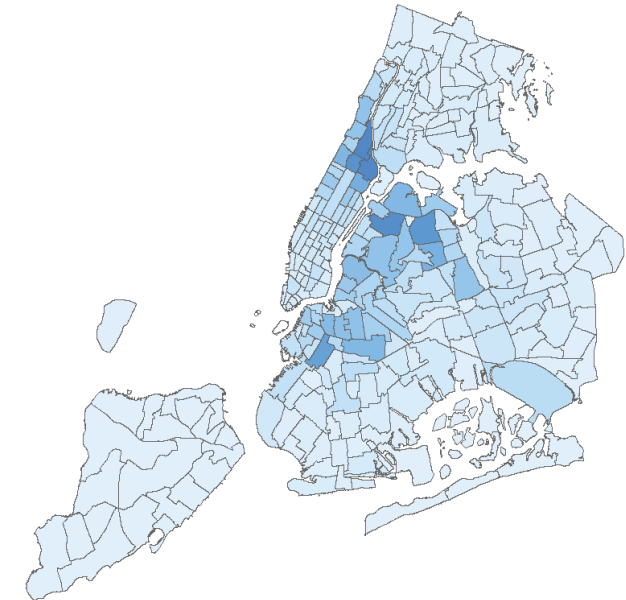
287,287

▲ 22.9% MoM

Pickup Zones



Dropoff Zones



Average Trip Distance

YTD

2.66

▲ 3.8% YoY

12 Month Trend



MTD

2.66

▲ 1.1% MoM

Average Trip Duration

YTD

00:12:56

▲ 00:00:52 YoY

12 Month Trend



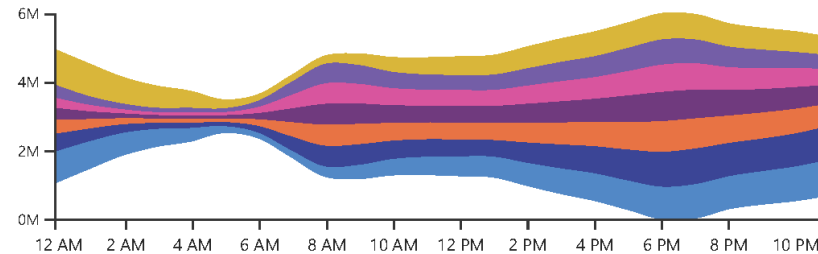
MTD

00:12:53

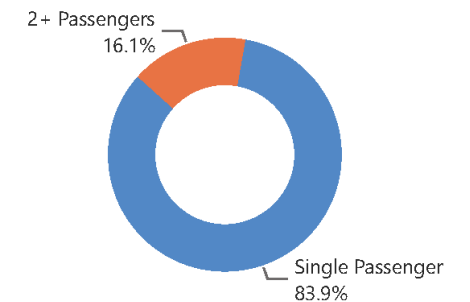
▼ 00:00:10 MoM

Taxi Rides by Hour of Day and Day Name

● Saturday ● Friday ● Thursday ● Wednesday ● Tuesday ● Monday ● Sunday



Taxi Rides by Rideshare





CHOOSING COLORS



COLOR INSPIRATION

- Corporate Branding
- Nature
- Paintings
- Wallpaper samples
- Physical Design
- Web Design
- Anywhere we see color around us!



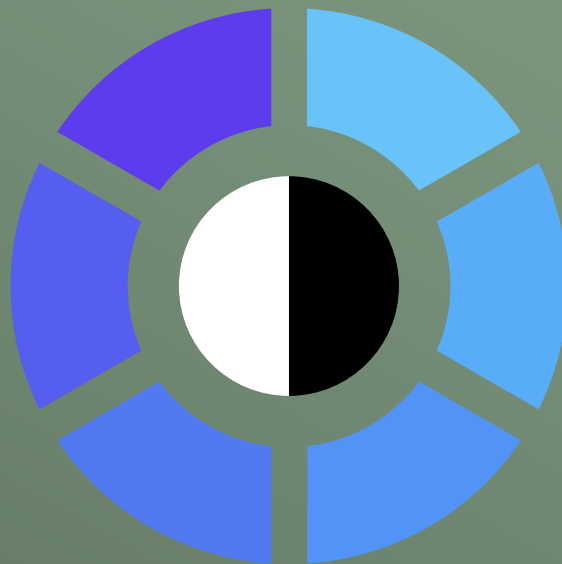
COLOR CONSIDERATIONS

- Start designing in grayscale
- Add color intentionally
- Don't use more color than necessary
- Use shades of a single color rather than multiple colors
- Pay attention to your senses when looking at a palette
- There are many beautiful color palettes, but not all suit data visualization
- Develop your style!

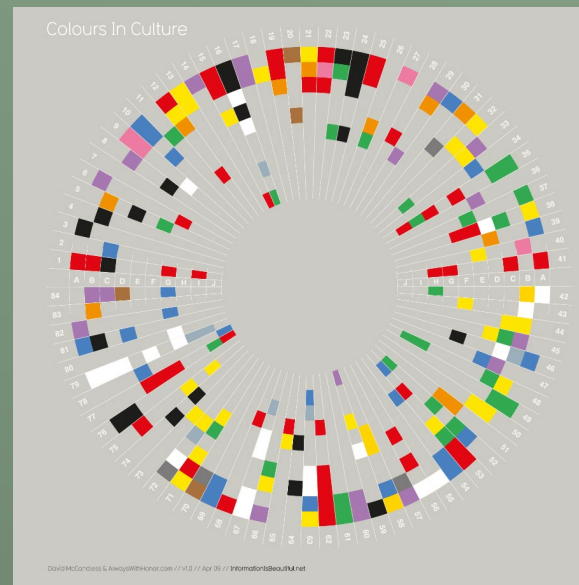
COLOR PALETTE TOOLS



Adobe Color



Leonardo



Color in Culture
Information is
Beautiful

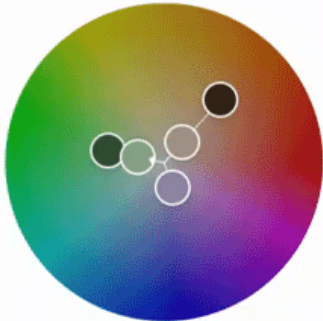
ADOBE COLOR

Adobe Color

CREATE EXPLORE TRENDS **New** LAB LIBRARIES

Color Wheel Extract Theme Extract Gradient Accessibility Tools

Color Harmony Color Mode
Triad RGB



Save to My Library +

Name
My Color Theme

Tags
Enter or Select from below

Blue + Brown +
Beige + Dark +
Calm +

☒ Publish Theme

[Check for Accessibility](#)

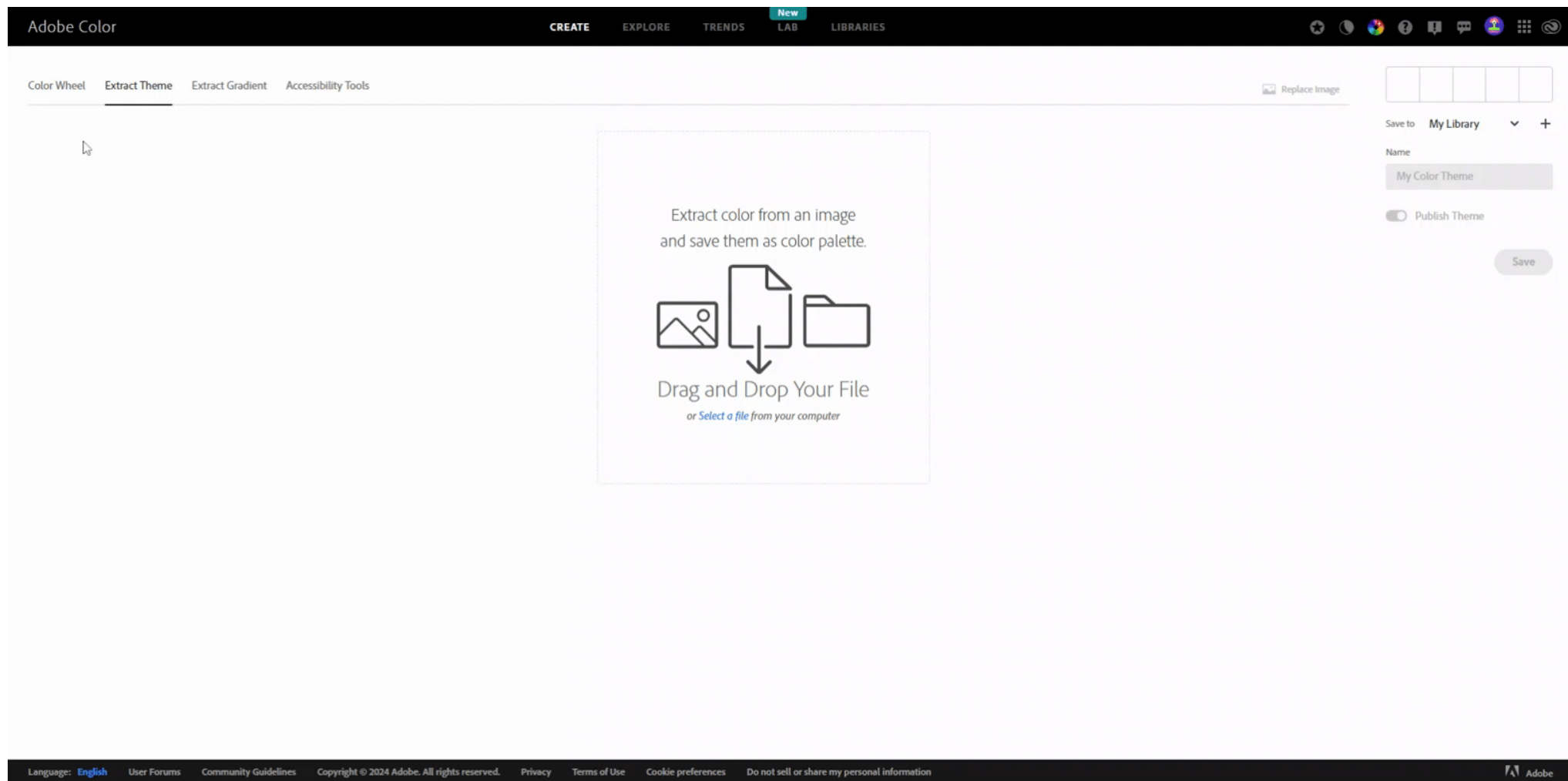
Save

| | #A19285 | #8C85A1 | #85A187 | #304C32 | #332518 |
|---|---------|---------|---------|---------|---------|
| R | 161 | 140 | 133 | 48 | 51 |
| G | 146 | 133 | 161 | 76 | 37 |
| B | 133 | 161 | 135 | 50 | 24 |

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Adobe

ADOBE COLOR





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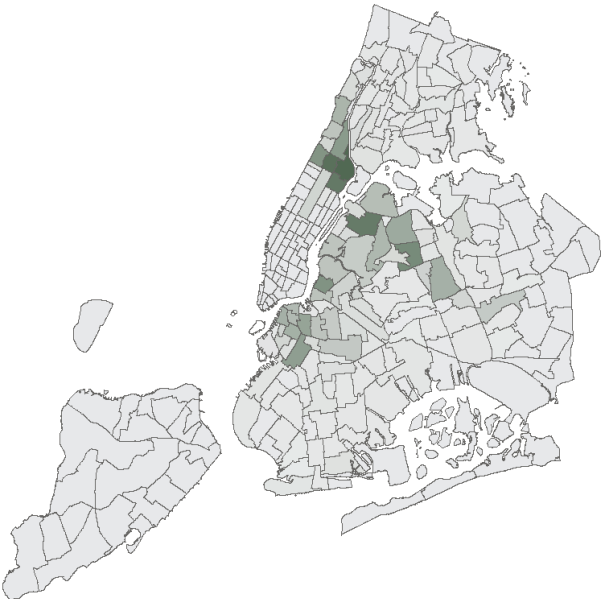


MTD

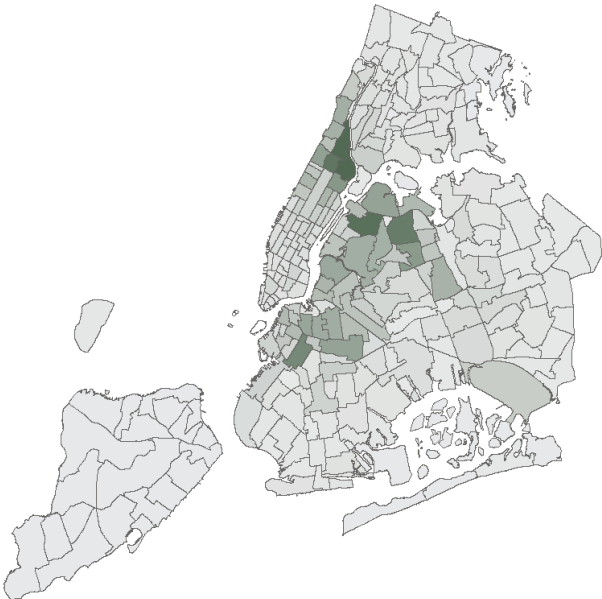
00:12:53

▼ 00:00:10 MoM

Pickup Zones

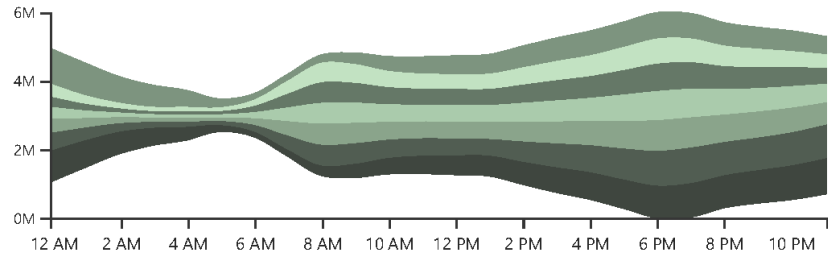


Dropoff Zones

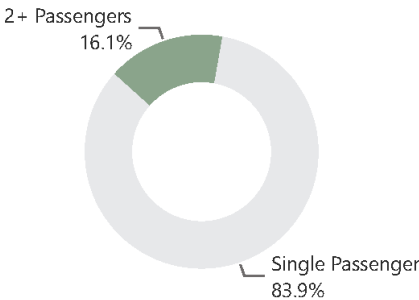


Taxi Rides by Hour of Day and Day Name

● Saturday ● Friday ● Thursday ● Wednesday ● Tuesday ● Monday ● Sunday



Taxi Rides by Rideshare





DESIGNING FOR VISUAL IMPAIRMENTS

ADOBE COLOR ACCESSIBILITY TOOLS

Adobe Color

CREATE EXPLORE TRENDS **New** LAB LIBRARIES

Color Wheel Extract Theme Extract Gradient **Accessibility Tools**

Tools

Color Blind Safe

Potential Color Conflict

No conflicts found. Swatches are color blind safe.

Color Mode

RGB

Save to My Library

Name

Green

Tags

Enter or Select from below

DistinctColors

CreativityForAll

ColorBlind Blue

Brown

Publish Theme

Theme is color blind safe

Save

Color Blind Simulator

Deuteranopia

Protanopia

Language: [English](#) User Forums Community Guidelines Copyright © 2024 Adobe. All rights reserved. Privacy Terms of Use Cookie preferences Do not sell or share my personal information

COBLIS - COLOR BLINDNESS SIMULATOR



Home CVD Essentials Color Blindness Tests Color Tools Contact

Coblis — Color Blindness Simulator

If you are not suffering from a color vision deficiency it is very hard to imagine how it looks like to be colorblind. The **C**olor **B**Lindness **S**imulator can close this gap for you. Just play around with it and get a feeling of how it is to have a color vision handicap.

As all the calculations are made on your local machine, no images are uploaded to the server. Therefore you can use images as big as you like, there are no restrictions. Be aware, there are some issues for the "Lens feature" on Edge and Internet Explorer. All others should support everything just fine.

So go ahead, choose an image through the upload functionality or just drag and drop your image in the center of our **C**olor **B**Lindness **S**imulator. It is also possible to zoom and move your images around using your mouse – try it out, I hope you like it.





Drag and drop or paste your file in the area below or: No file chosen

| | | | |
|---|--|--|--|
| Trichromatic view: | Anomalous Trichromacy: | Dichromatic view: | Monochromatic view: |
| <input checked="" type="radio"/> Normal | <input type="radio"/> Red-Weak/Protanomaly | <input type="radio"/> Red-Blind/Protanopia | <input type="radio"/> Monochromacy/Achromatopsia |
| | <input type="radio"/> Green-Weak/Deuteranomaly | <input type="radio"/> Green-Blind/Deuteranopia | <input type="radio"/> Blue Cone Monochromacy |
| | <input type="radio"/> Blue-Weak/Tritanomaly | <input type="radio"/> Blue-Blind/Tritanopia | |

Use lens to compare with normal view: ☒ No Lens ☐ Normal Lens ☐ Inverse Lens

[Reset View](#)

FREE Color Blind Check

New kind of color blindness test! Try **Color Blind Check** and test type and severity of your color vision deficiency. Easy and fun!





DESIGNING FOR VISUAL IMPAIRMENTS

- Be aware of fonts and font sizes
- Use icons
- Add Alt Text entries



BRINGING IT ALL TOGETHER



NYC Green Taxi Operations Dashboard

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12 Month Trend



MTD

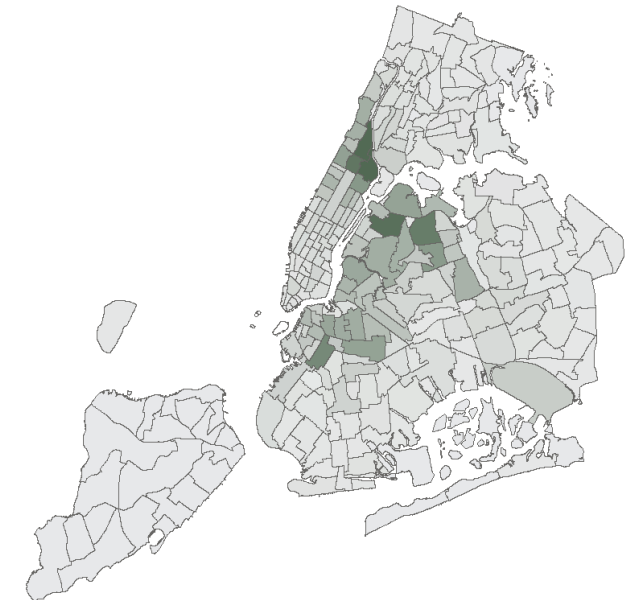
00:12:53

▼ 00:00:10 MoM

Pickup Zones

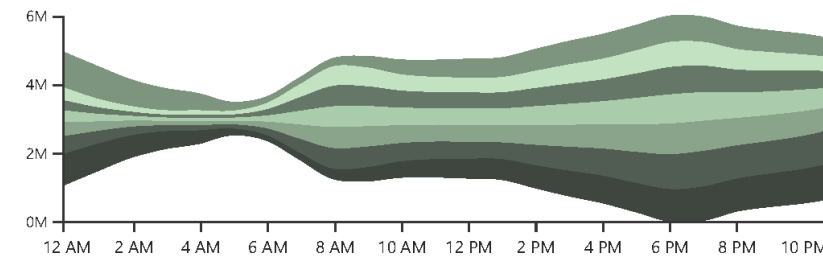


Dropoff Zones

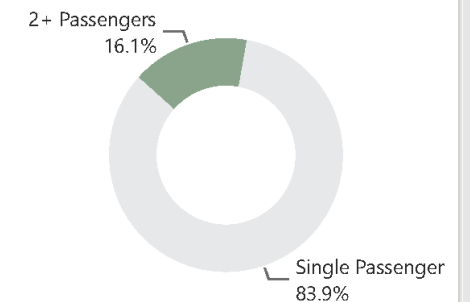


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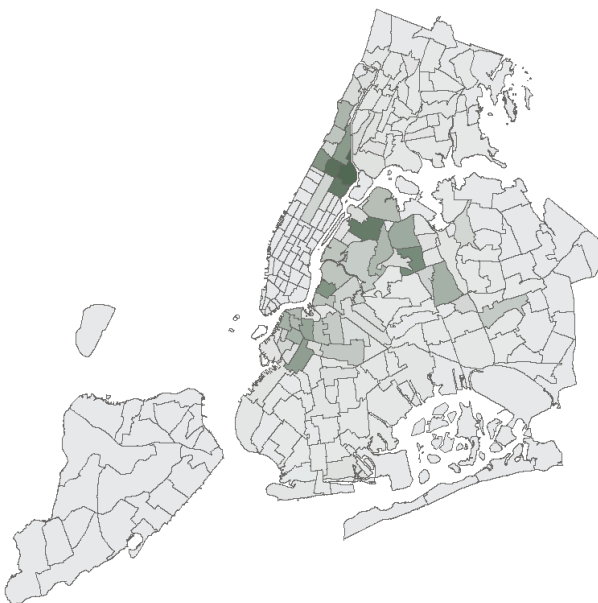


MTD

00:12:53

▼ 00:00:10 MoM

Pickup Zones

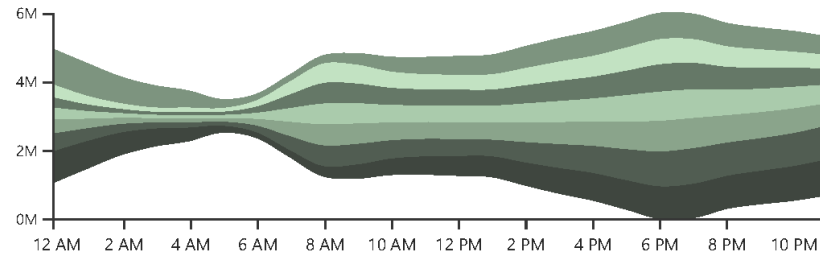


Dropoff Zones

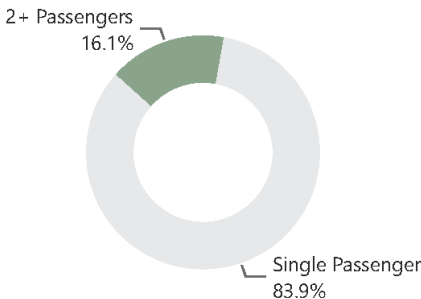



Taxi Rides by Hour of Day and Day Name

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Taxi Rides by Rideshare





Q&A

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 [@mdhewitt83](https://twitter.com/mdhewitt83)