SAC
SMITH ANALYTICS CONSORTIUM

5th Annual Datathon

Datathon Kickoff

March 29th, 2024

Schedule

Kick-off | Office Hours | Deadline | Final Presentations + Judging

Monday	Tuesday	Wednesday	Thursday	Friday
MAR 25	MAR 26	MAR 27 11:59 PM Registration Closes	MAR 28	MAR 29 2 – 4 PM (Virtual) Core Consulting Workshop & Kickoff
APR 1	APR 2	APR 3	APR 4 6 – 7 PM (Virtual) Office Hours #1	APR 5
APR 8 6 – 7 PM (Virtual) Office Hours #2	APR 9 ***5:00 PM*** Datathon Submission Due	APR 10	APR 11 8:00 PM Students notified of 1st Round decisions	APR 12 10 AM – 2 PM Datathon Finale (Invite Only)

***Solutions eligible for judging MUST contain 1 .ZIP file containing the team's Tableau Workbook, PowerPoint Presentation and Zoom Video Recording.**

Requirements

The Smith Analytics Consortium Annual Datathon enables students to team-up, showcase their data analytics skills, and sprint to the best solution. With the provided dataset, teams will have several days to model and visualize insights before final presentations and judging. Presentations will be evaluated using several criteria, ranging from technical impact to creativity in approach.

*AI use is allowed. However, be cautious about how influential it is in your solution since:

- Everyone will be using the same datasets/case
- You will have to back your solution up in person if you make it to the finale so understanding what you actually did in your analysis is crucial.

Technology

Data Visualization:
Tableau

Data Analysis:
Google Colab
Open Source (R, Python, etc.*)

Data

US City Data
World Country Data
NBA Financials Data

To be downloaded from Datathon Canvas (ELMS) site

Submission

1. Packaged Tableau workbook (.twbx)
2. PowerPoint presentation
3. 8 min Zoom Recording Presentation (if a presentation is longer than 8 minutes the group will be disqualified)

Submission Criteria

A Single .ZIP File Containing:

Packaged Data Visualization	File containing the visualization + the data i.e., packaged Tableau (.twbx)
PowerPoint / Keynote Presentation	Presentation with your insights/solutions (Introduction of Problem / Opportunity, Findings, Next Steps/Art of the Possible)
Zoom Recording Presentation	Up to 8 Minute Zoom Recording Presentation (Recordings over by 1 second will be disqualified)

Teams must submit their Tableau workbook, PowerPoint Presentation and Zoom Recording in a .ZIP file to the Datathon ELMS site by **5 PM on TUESDAY 04/09**

Scoring Rubric

Addressing the Questions: The team's solution addresses each of the questions/prompts asked of them and provides adequate support behind any assumptions made.

1 — 2 — 3 — 4 — 5 — 6 — 7 — 8 — 9 — 10

Strongly Disagree — Neutral — Strongly Agree

Score _____

Novelty of Insights: The solution contains original, impactful, actionable insights for the investors.

1 — 2 — 3 — 4 — 5 — 6 — 7 — 8 — 9 — 10

Strongly Disagree — Neutral — Strongly Agree

_____

Quality of the Methodology: The team logically structures and defends their problem-solving approach.

1 — 2 — 3 — 4 — 5 — 6 — 7 — 8 — 9 — 10

Strongly Disagree — Neutral — Strongly Agree

_____

Quality of Presentation: The team articulated their solution's business case to the judges at a client facing level.

1 — 2 — 3 — 4 — 5 — 6 — 7 — 8 — 9 — 10

Strongly Disagree — Neutral — Strongly Agree

_____

Multidisciplinary Team: Mixture of Undergraduate/Graduate (1), multiple programs (1), Smith/Non-Smith (1), or UMD/AU-Kogod (1).

1 — 2 — 3

Team Number

Grand Score Total

Case Background – NBA Information

❖ Background on the NBA as a league

- The National Basketball Association (NBA) was originally the Basketball Association of America (BAA) which was created in 1946. The league at the time only had 11 teams.
- The original NBA's "Western" Division was only really the Midwest – they hadn't expanded to places like California or Oregon.
- Since its inception, the NBA has expanded to a total of 30 teams playing in major cities all throughout the U.S. and Canada.

❖ Background on NBA as a business

- The 2022/23 season raked in $10.58 billion (~5% increase in revenue from 2021/22 season).
- The average valuation of NBA teams in 2023 was $3.85 Billion.
- The NBA is the third most watched sport in the U.S. trailing closely behind the MLB.

❖ Opportunities for the NBA

- Streaming is the new cable, and more teams *could* equal more viewership on apps viewers already have.
- More teams could mean more sponsorships, greater viewership, higher competition, increased broadcasting rights, and more merchandise sales.

Case - NBA

With the growing popularity of professional basketball, the National Basketball Association (NBA) is looking to expand their league from 30 teams to 32. There have been talks of these teams being placed in Seattle, WA and Las Vegas, NV. However, the NBA isn't sold on these being the best options and wants to explore other cities to maximize the profit, viewership, and international marketability for the NBA. Your team of consultants and data scientists have been hired to recommend how the NBA should proceed with this expansion.

Case Questions

1. Your team has been provided with a dataset including thousands of US cities. Use this data and/or any other data you find to select 2 cities to pitch to the NBA as prime locations for the association's expanse.
   - What are the two cities that your team sees as the best options to place a new team in? How did your team come to this conclusion?
2. Choose one of the two locations you selected above. The NBA would like to understand estimated revenue and costs associated with this new location.
   - How much capital will the NBA need to spend to cover the costs associated with the new location?
   - Estimate the annual revenue generated for the new team's major revenue streams. How long will it take to break even?
   - Perform an analysis on the best sponsor for this new NBA team considering factors such as brand alignment, social media engagement, and potential financial impact.
3. The NBA would like to preemptively create a promotional plan for the new team you selected above.
   - Based on your analysis and/or research of the new city and fanbase, propose a team mascot and team colors. Why that mascot? Why those colors?
   - How might the NBA promote this team to the new city to maximize brand awareness and fanbase growth?
   - Despite the NBA not being an inherently global brand, one executive wants to explore the possibility of growing a fanbase for the new team in an international market. Select a country you recommend they target and explain why this market could be a successful endeavor for the NBA.
   - What technology would you use to support the marketing, logistical, and/or management efforts for the new team?

Here comes…the Data

Data	Description
us_city_data.xlsx	Demographic, economic and other data about U.S. cities
world_country_data.xlsx	2023 data that includes various demographic and economic data about all countries
NBA_financial_data.xlsx	Various financial data about NBA teams and their stadiums

Technical Support

Facing a technical issue? Can't access the data? Tableau won't load? Reach out to the Datathon team via Canvas!

There is a public discussion board for all participants to see so that everyone is on the same playing field. Individual team messages will be returned with a request to post them on the discussion board to keep it fair.

Note: We will not be providing code guidance or dashboard/PowerPoint review in support of your solution. Support will be provided for technical issues/data clarifications only.

Additional Resources

Topic	Link/ Resource	Resource Description
Data Visualization	Tableau Desktop: https://www.tableau.com/learn/training	Training resources for two of the leading data visualization platforms on the market today.
Google Colab	https://research.google.com/colaboratory/faq.html	Frequently asked questions regarding Google Colab and it's capabilities
Technical Support Discussion Board	https://umd.instructure.com/courses/1365192/discussion_topics/5326406	Technical support resource for any issues pertaining to access to data, technology issues, etc.
Pandas Merge	https://tinyurl.com/pandasmerge	Documentation on merging Pandas Dataframes based on table keys.

Datathon | Robert H. Smith School of Business
Questions

How To:
Connect Google Colab to Google Drive

1 – Add Datathon Files to MyDrive

1. Open the Shared Datathon ELMS site
2. Download NBA_financial_data.xlsx
3. Upload NBA_financial_data.xlsx to a Google Drive location

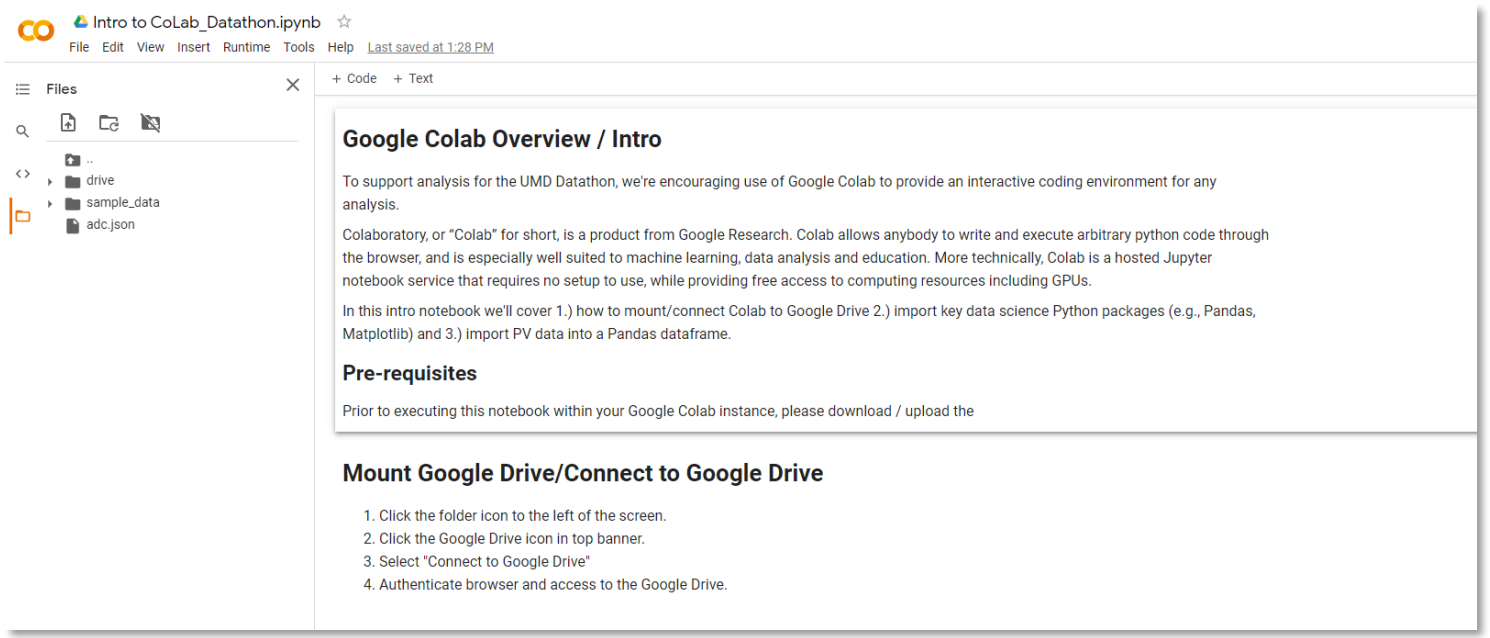
Open My Drive to verify that the files have been

Successfully added.

2– Follow Notebook Directions in 'Intro to CoLab_Datathon_ipynb' to Connect CoLab

To facilitate common scenarios you may face in Google Colab, we created an example notebook. The notebook will walk you through the following:

- Mounting Google Drive/Connecting to Google Drive
- Setting the directory
- Checking Google Drive Contents to ensure necessary files are present
- Importing data



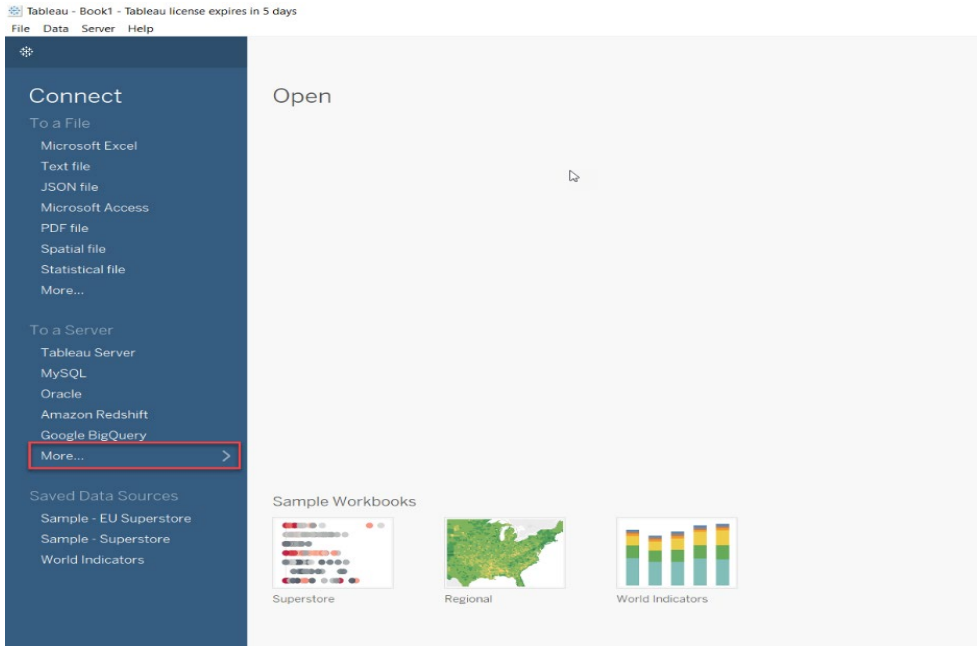
Access the Intro Datathon Colab Notebook – HERE

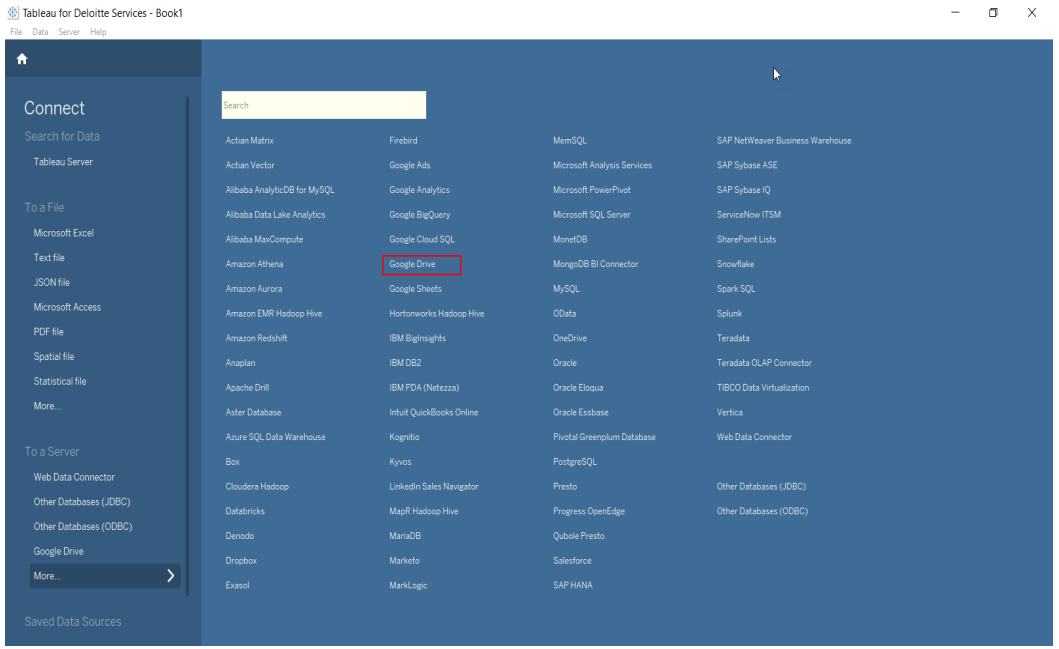
How To:
Connect Tableau to Google Drive

1 – Open Tableau and Select Data Connector

This guide will walk you through how to connect Tableau to the Google Drive (once downloaded and uploaded to your team's drive). Prior to running through the following steps, please download and store the Datathon data within your own Google Drive account.

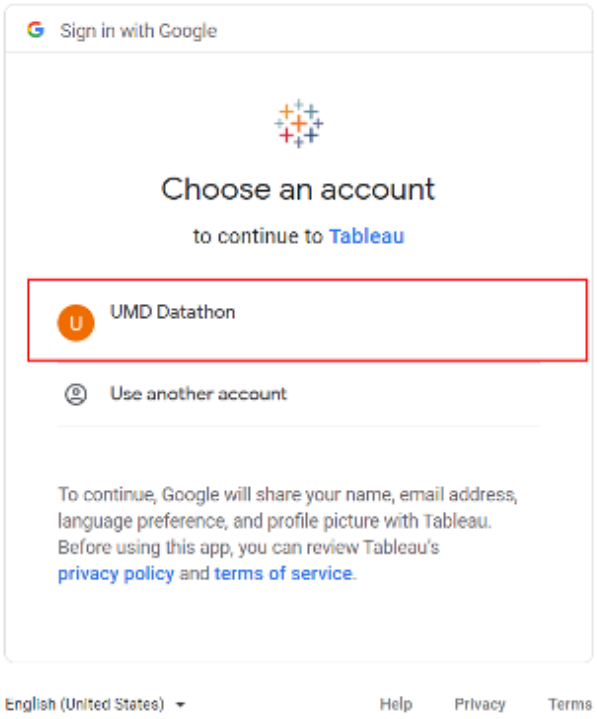
Next, open Tableau and on the left side under "**To a Server**" select "**Google Drive**." If not shown in the list, select "**More…**" and identify "Google Drive" from the list of options.

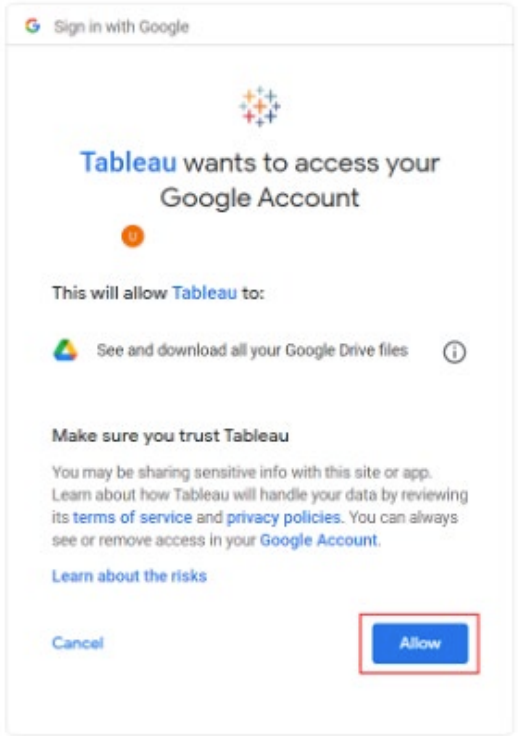




2a – Log-in to Google Account (student email)

After selecting "Google Drive" from the options menu, you'll be prompted to log-in to your Google account. Please use the email you signed-up for the competition with (i.e. *umd.edu, *@terpmail.umd.edu, *@american.edu)



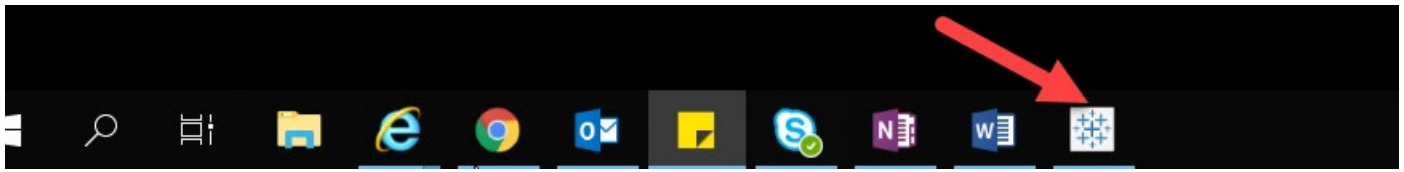


2b – Close out of Browser; Access Tableau

Once signed into your Google Account, you'll be prompted that the browser window will close, you may close your browser at this moment.

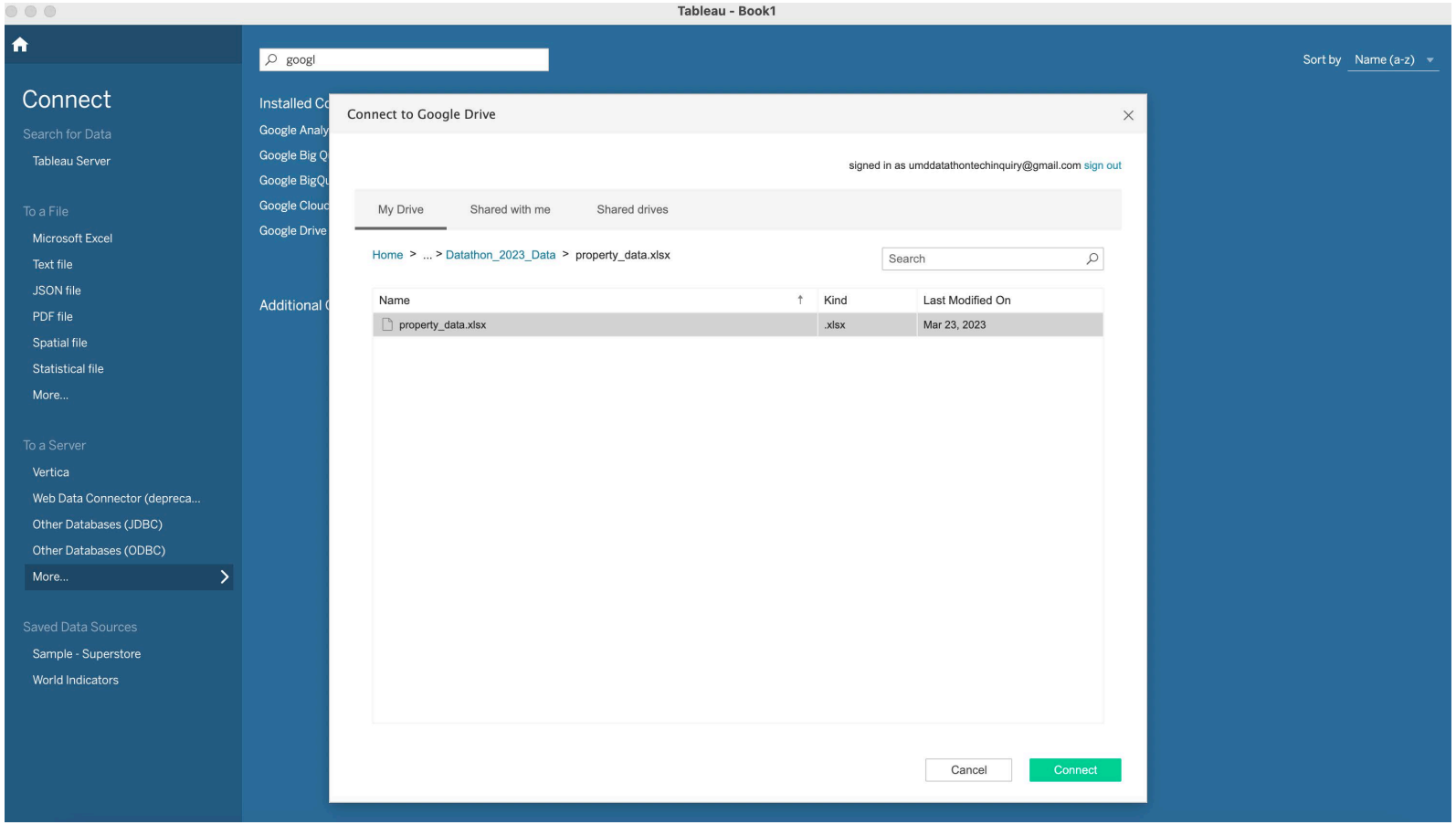
Tableau created this window to authenticate. It is now safe to close it.

On the task bar, locate the 'Tableau' application and click.



3 – Connect to the Datathon Data in Google Drive

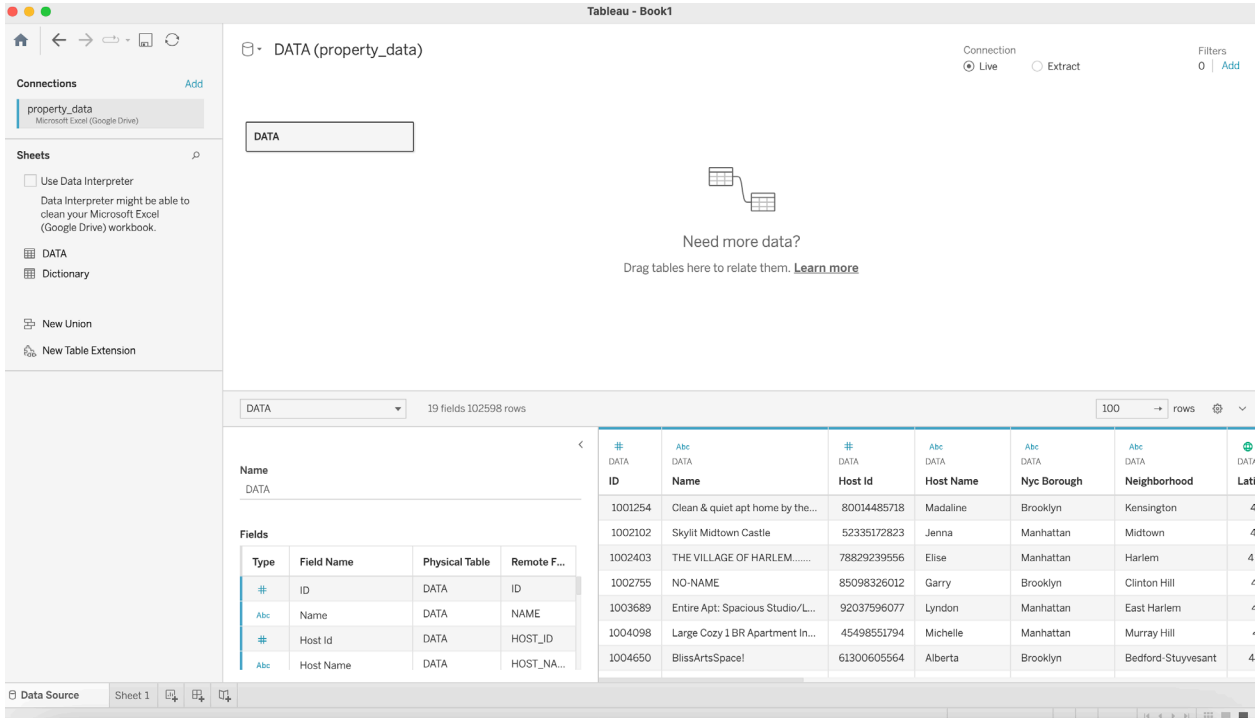
Navigate back to Tableau and locate one of the Datathon data files within your Google Drive. Select a file and then click 'Connect' to connect Tableau to the data.



4 – Add a Table

After confirming the dataset, the one table should populate on the left panel like the image below. Click and drag the table into the top input area, and the data should populate into the table view.

Congrats, you've connected Tableau to Google Drive! Good luck with your analysis.



Slide Creation/Visualization Tips & Tricks

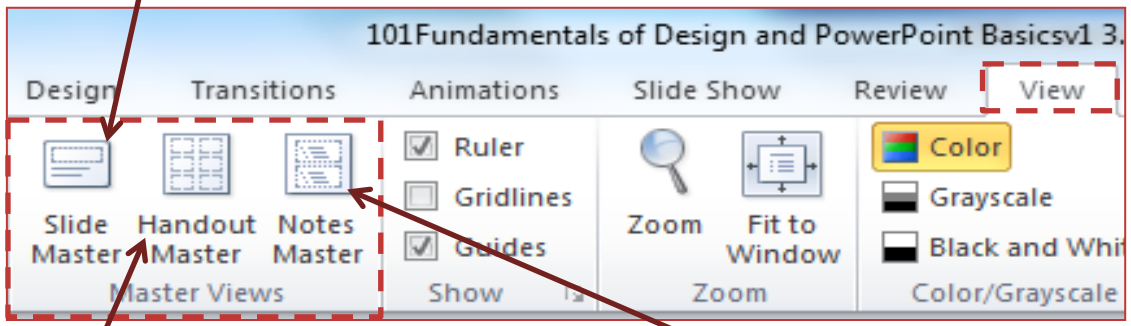
Telling an Effective Story

Telling an effective story in a slide presentation demands attention from four perspectives:

	Focus	Examples
Think it	Frame and present ideas and solutions — the depth of thought and the quality of the consulting skills should be evident in the deck	• Clear thesis • Viable solution • Supporting evidence
Organize it	Arrange ideas in a logical structure to guide the audience through the issue and the recommendation coherently	• Logical arrangement • Reiterative deck-building process • Continuity between pages
Design it	Choose slide layout, look-and-feel, and appropriate visuals and graphics	• Balanced, uncluttered layout • Clearly labeled visuals • Appropriate display of data
Polish it	Use correct, concise and precise language — composition should be appealing	• Grammar and spelling • Punctuation • Active voice

Slide Master

Slide Master
Controls the format and placement of the titles, text, bullet lists and logos / pictures on the slides



Handout Master
Controls the format and placement of headers and footers when printing handouts (multiple slides per page)

Notes Master
Controls the format and placement of text in the notes section

How to Modify a Slide Master:

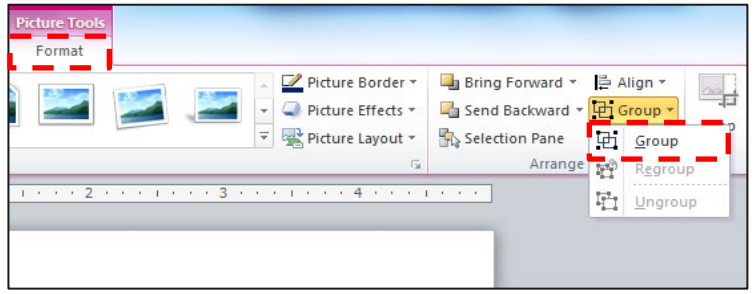
1. Click on the **View** tab
2. In the Master Views group, select **Slide Master**
3. Adjust the fonts or layout (e.g. text or bullet style, color, and placement)
4. Click **Close Master View**

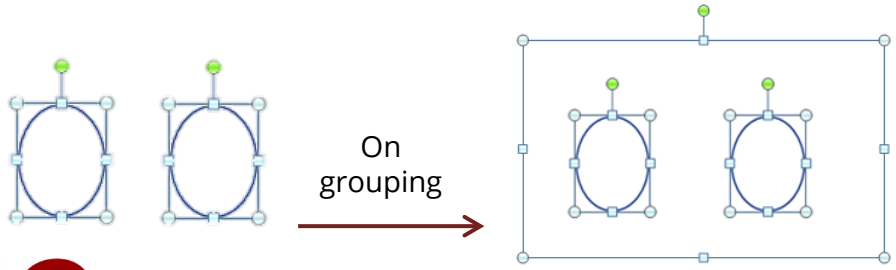
Grouping and Ordering Objects

Grouping

Group multiple objects together to allow them to be moved or formatted together.

1. Select the objects you want to group together
2. Click on the **Format** tab
3. From the Arrange group, select the **Group** option (or **Ctrl+G**)



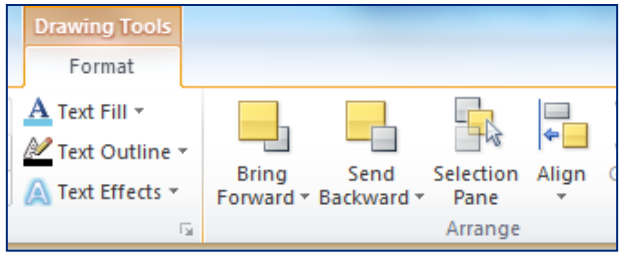


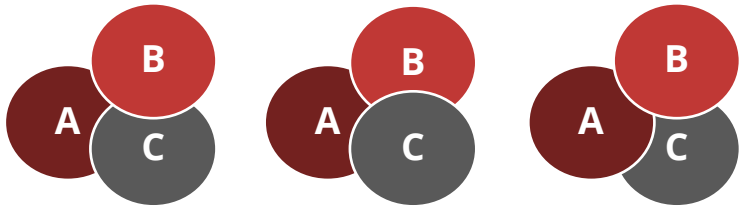
Order/Reorder Objects

To order/reorder objects, follow these steps:

1. Select the objects you want to reposition
2. Click on the **Format** tab
3. From the Arrange group, select either **Bring Forward** or **Send Backward**

To select multiple objects on the slide, click each object while pressing down on Shift



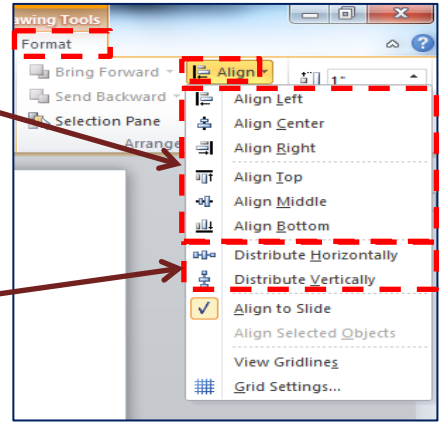


Aligning Objects

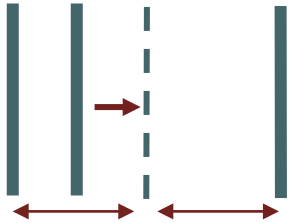
Use the following features to align or distribute shapes or multiple objects evenly

Align
Positions left, center, right, top, middle, or bottom

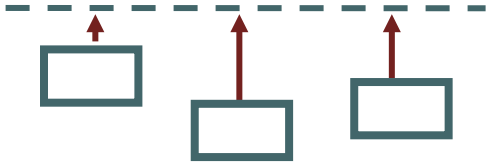
Distribute
Positions horizontally or vertically



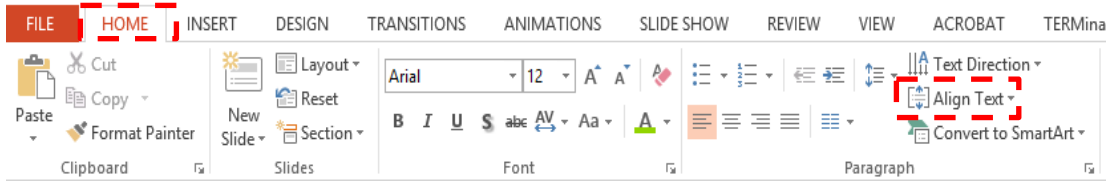
Hold down the [Shift] key and select each line and select **Distribute Horizontally**



Hold down the [Shift] key and select each box and select **Align Top**

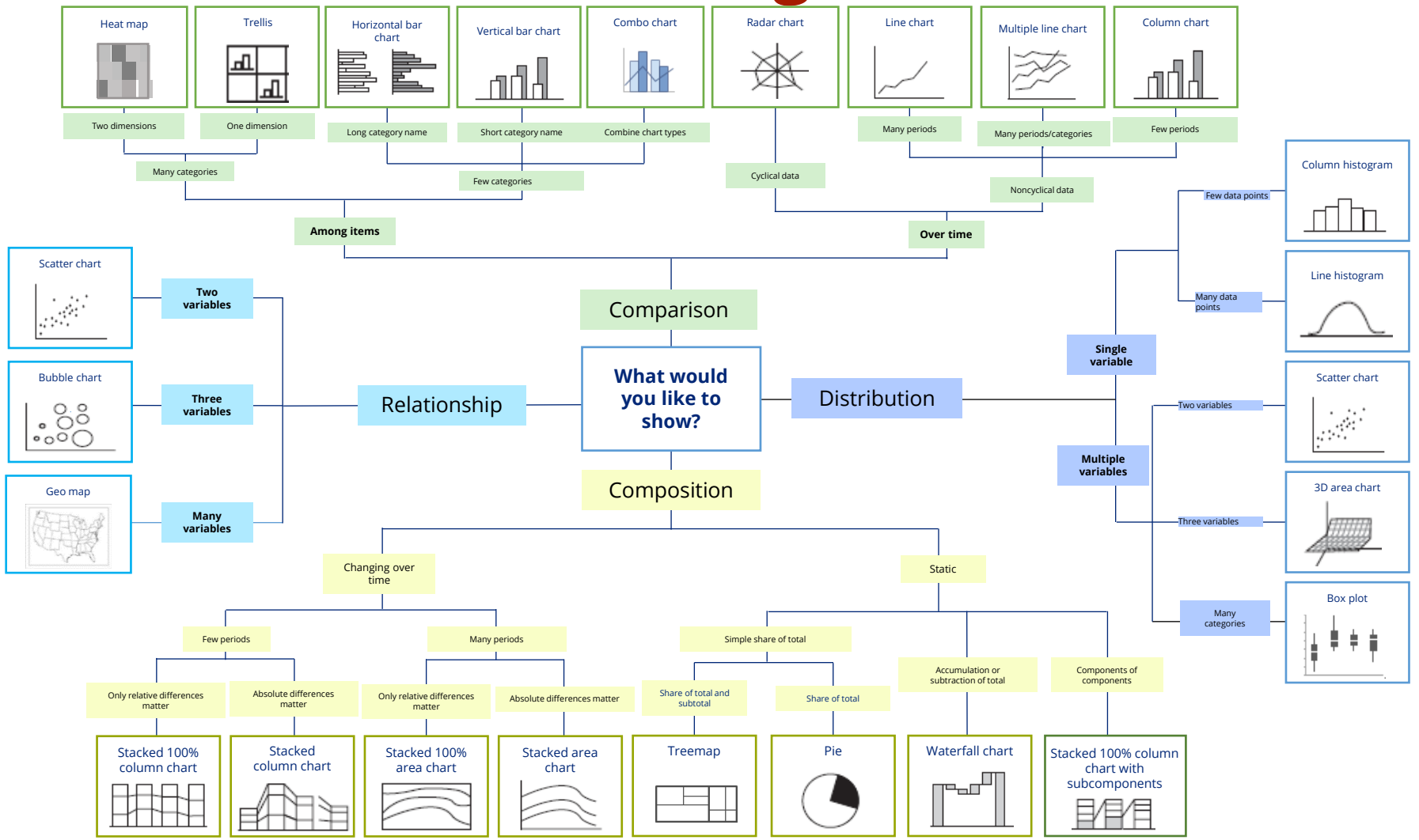


Text can also be aligned in different ways.



Top	ANCHOR POINT
Middle	ANCHOR POINT
Bottom	ANCHOR POINT
Top Centered	ANCHOR POINT
Middle Centered	ANCHOR POINT
Bottom Centered	ANCHOR POINT

Design — How to Choose the Right Chart



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