Tableau bootcamp

1. Data Analytics and Data Science
   1. What is this?
   2. Demand for skills
   3. Careers – mention that their folder contains a jobs outlook from the Department of Labor
2. Tableau
   1. What is it? Let’s watch the video (click on what’s is Tableau to open)
   2. Uses –
3. Let’s create some charts and graphs!
   1. Sign on the Tableau (not Tableau Prep which is used to prepare data
4. Connect to Data
   1. Connect panel on left
   2. Types of files/servers you can connect to
   3. Saved data sources ( use if you will access the file multiple times)
   4. Open pane
   5. Get help on Discover side on right hand side
   6. Click on Microsoft excel – click on downloads – select Sample Superstore
   7. Data source screen (Sheets – different tabs in Excel)
      1. Drag over Orders to Canvas (get data grid) Snapshot of first 100 rows of data
      2. Can use to “clean” data – ours Is cleaned
5. Got to Worksheet : Explain screen
   1. Data Pane – shows fields in the data you are connected to (icon indicates the data type

|  |  |
| --- | --- |
| **Icon** | **Data type** |
|  | Text (string) values |
|  | Date values |
|  | Date & Time values |
|  | Numerical values |
|  | Boolean values (relational only) |
|  | Geographic values (used with maps) |
|  | Image role (used with image link URLs) |
|  | Cluster Group (used with [Find Clusters in Data(Link opens in a new window)](https://help.tableau.com/current/pro/desktop/en-us/clustering.htm)) |

* 1. Shelves: columns (X axis) Rows (Y axis)
  2. Dimensions (categorical data)
  3. Measure (numerical, quantitative)
  4. Marks Card: adjusts how you see the data

1. Create bar chart showing sales
   1. (double click sales)

(change Sales to Dollars) click on sales pill down arrow. Go to format. Left side of screen panel will come up. Go to scale. Then under numbers, choose currency custom and then make it 0 decimal places

Let’s see how sales look like for each major category of product. Double click on Category on the data pane

Why is Office supplies so low? Let’s look at the types of products that are included in each major category

Double click sub-category

Let’s change this to a horizontal bar (click on rotate) on ribbon , could also change using the show me

Sort either ascending or descending

1. Look at profit
   1. Click on profit (drop it in middle of chart (it will say SHOW ME))
   2. Tableau brought it in as a Marks card adjusts how you see the data
   3. What is most concerning (which sub-category)
   4. Name worksheet (tab at bottom, rename like you do in excel) Name it PERFORMANCE BY PRODUCT
2. New worksheet: Is sales of tables a nation-wide thing or just a regional situation?
   1. Create a map since we have a lot of geographical data
      1. Double click on Country/Region
      2. Drop profit on color
      3. Double click on state-province Which state looks the least profitable?
      4. Filter data to just show table sub category (drag sub-category to filters) Click on Tables. Now NEW York is the worst. Is it the whole state or just a specific area. Drill down further . Bring in City (double-click city) Click on color change border to black. Zoom into NEW YORK City. Drag Sales to Size. Cities with higher sales will show as a larger circle.
      5. Save sheet as Performance by Region
      6. Question: What is the profit in Houston of copiers?
3. Tables have not done well. Is this always been a trend or is this something new?
   1. Create new sheet
   2. Double click on Order date. Drag sales to Rows
   3. A line graph is created. Sales have been increasing. What about profit?
   4. Drag profit to Rows Change Y axis scale to show currency. Right click on Y axis. Select format. Format panel pops up. Change to currency
   5. Let’s see this by month. Click on + by Year on column shelf. Now shows Quarter . Click on + and now we get months. Delete Qtr
   6. We want this on a dual axis. Grab profit bil and drag to right hand side of sales graph (it changes to a green bar). Let go. Need to synchronize axis. Click on the numbers on the right side of graph and choose synchronize axis
   7. Let’s show as bar graph. Click on Marks card(sales) change automatic to bar. Now we have a bar chart of sales with a line graph for profit.
   8. Let’s make them both bars. Go to Marks card for Profit. Change automatic to bar
   9. Remember, this is showing us total sales and profit by month for all products. We are concerned about tables so let’s add a filter. Drag sub-category to filter. Select Tables. You can see that in most cases, tables have not been profitable. Management may want to fix this.
   10. Name as Performance BY MONTH They may want to know is it a customer, region? What are we going to do to fix this.
4. Now we will create a scatterplot. (NEED TO variables
   1. Drag sales to columns. Profit to rows
   2. Customer name- drag and drop in view panel (notice there is a positive correlation)
   3. Click on analytics near data bar. Click on trendline (double click)
   4. How does this look by region? Drop region on Color (notice south does not have a good of a correlation)
   5. Drop subcategory on filter. Select tables (remove trendline for now by double clicking on it
   6. Far right side, click on East (use highlighter) there is a negative correlation (When sales increase, profit decreases)
   7. Show how to exclude outliers (right click on outlier dot, click exclude)
   8. Rename sheet Customer Performance

10 minute break

1. Dashboard creation
   1. Need to share with your boss. All 4 worksheets are important as they all tell a story when looked at together. We will put on a dashboard. Provides a better snapshot when they are all together
   2. Data Source click on dashboard
   3. Left side is dashboard pane. Can create an preview for different devices, desktop, mobile device
   4. Grab first sheet, drag over and let go
   5. Grab region sheet, drag over to right of first sheet
   6. Grab Month sheet, drag to below first sheet
   7. Grab Customer, drag to right of Month sheet.
   8. Clean up by removing subcategories on right
   9. Go back to each sheet and remove filters
   10. Return to Dashboard. Let Product performance chart drive the dashboard. Click in the chart of the dashboard. Choose funnel on right to use this one as the filter)
   11. To filter, click on specific product bar, it changes all of the other charts
   12. Click on customer chart, click on highlighter
   13. Rename Dashboard as Superstore Performance
   14. Dashboard can now be published to Tableau Public, Tableau Cloud. It can be exported as powerpoint, PDF, Packaged workbook
2. Explain that students can get a one year free license to Tableau Desktop: go to page. Show page and how they can see other visualizations.