Alteryx Demo / Lab Instructions

## **Prerequisites**

* You must be connected to the internet
* You must be running a Windows 7 computer or later
* You must have Internet Explorer 9 or greater.
* You must download and install Power BI Desktop (<https://aka.ms/pbidesktopdl>)
* You must have the AlteryxPowerBi.pbix on local machine
* You must have the AlteryxPowerBI.csv on the local machine
* You need an active Power BI account. You can either:
  + Sign up for Power BI with an existing corporate credential (not a gmail.com or outlook.com type of account).
  + Use a pre-supplied account given to you at the event.

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| **Reviewing an Existing Power BI Report** | |
| 1. Open Power BI Desktop on your computer 2. If the “Startup” window appears, click the “x” in the top right corner to close it. 3. From the Power BI Desktop menu bar, select “**File**” | “**Open**” 4. Navigate to the folder where you extracted the AlteryxPowerBiLabFiles.zip, and open the **AlteryxPowerBi.pbix** file. | C:\Users\BretS\AppData\Local\Temp\SNAGHTML18d5dd57.PNG |
| 1. Click the “**Data**” icon along the left edge to open up the Dataset used for the sample report. 2. *The data we are working with is similar to the data you saw us preparing in the earlier demo. The following describes this data:*    * *Has customer sentiments – customer responses to a survey*    * *Data is geocoded*    * *Customer sentiments are about 3 companies*    * *Data has distance from customer to company* |  |
| 1. Click the “**Report**” icon along the left to view the sample report. 2. *This report is taking advantage of out-of-the-box controls:*    * *Map*    * *Table*    * *Cards* 3. *The Map control takes advantage of the fact that we geocoded the sentiment data.*    * *The size of the bubbles represents the relative count of customers*    * *The color of the bubbles represents the relative sentiment* 4. *The Table show the raw responses* 5. *The Cards above show specific indicators such as the average response score.* |  |
| 1. **Click** on any of the bubbles in the map. 2. *Notice that the list and the cards are filtered to your selection.* 3. *As we will see later, we can easily control which controls are filtered and when.* |  |
| 1. *Reports can have multiple pages* 2. **Click** on the ‘Sentiment by Distance Traveled’ tab on the bottom to navigate to the second page of this report. 3. *This page also has a Table control along with some cards. However, instead of a Map, the page has a Scatter Chart.* 4. *The Scatter Chart is allowing us to visualize the average of response score by the average of the distance in miles. The thought was that the sentiment may be negatively related to proximity to the company location. However, this visualization does not support that.* 5. **Click** on any of the bubbles in the Scatter Chart. Notice that the cards and the list are being filtered here, as well. 6. **Close Power BI. We will open a new instance for the next part of the lab.** |  |

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| **Creating the Report Yourself** | |
| 1. *Now that you have seen some of the rich visualizations that are available to you in these reports, let’s create the report yourself.* 2. **Open Power BI to start a new report.** If the startup window appears, as before, click the “X” in the top right corner to close it. 3. From the “**Home**” ribbon, **Click** the “**Get Data**” button 4. *You have a variety of data sources that you can choose from for your source data, including:*    * *Azure SQL Database*    * *Azure SQL Data Warehouse*    * *Spark*    * *Variety of file-based data sources* 5. *Further, as you saw in the earlier demo, Alteryx is able to publish directly to PowerBI. We are going to use data from an Alteryx workflow demoed previously.* 6. In the “Get Data” window, **Click** “**CSV**” and then **Click** “**Connect**”. 7. In the “Open” window, navigate to the folder where you extracted the “AlteryxPowerBiLabFiles.zip” file, **Click** the “**AlteryxPowerBi.csv**” file and **Click** “**Open**”. | C:\Users\BretS\AppData\Local\Temp\SNAGHTML18fb3b04.PNG |
| 1. In the “AlteryxPowerBI.csv” preview window, **Click** “**Edit**”. 2. In the “Query Editor” window, **Scroll Horizontally** to view the “**Zip**” column, then **Click** the **“Zip” Column Header** to select the column 3. *When the “Zip” column was read it, it was converted to a number and the leading zero was stripped off. We need to change it’s data type to text, and re-add the leading “zero” for them to be proper Zip codes.* |  |
| 1. With the “Zip” column selected, **Click** the “**Transform**” ribbon, **Click** “**Data Type: Whole Number**” then **Click** “**Text**” to change the data type to text. | C:\Users\BretS\AppData\Local\Temp\SNAGHTML190f2b53.PNG |
| 1. *Next we need to resupply the leading zero that was stripped off of the Zip codes.* | C:\Users\BretS\AppData\Local\Temp\SNAGHTML1918afd9.PNG |
| 1. With the “Zip” column still selected, **Click** the “**Transform**” ribbon, then **Click** the “**Format**” button, and then **Click** “**Add Prefix**”. 2. Verify that the Zip column is now properly formatted as a text column with a leading zero. Then **Click** the “**File**” menu, **Click** “**Close & Apply**” | C:\Users\BretS\AppData\Local\Temp\SNAGHTML191ce5ba.PNG |

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| **Add the Map** | |
| 1. *Let’s get started creating our report by adding a Map.* 2. **Click** on the Map icon to add our Map. You can resize the map to make it a little larger if you would like. |  |
| 1. There are 2 ways to set the location for the map: 1) we can set the Latitude and Longitude or 2) we can set the Location to a postal code. We are going to start with the 1st method.    * **Drag** the ‘Lat’ Field to the ‘Latitude’ property of the Map    * **Drag** the ‘Lon’ Field to the ‘Longitude’ property of the Map 2. *Notice that the bubbles appear for our selections* 3. Let’s make the size of the bubbles equal to the count of Users. **Drag** the ‘UserID’ field to the ‘Size’ property of the Map.    * *Notice that it correctly sets the Size to the Count of UserID.*    * *Further notice that the relative size of the bubbles has changed to reflect the count of users (customers)* |  |
| 1. As mentioned, you can also use the Postal code in Location in the Map.    * **Remove** the ‘Lat’ and ‘Lon’ properties by either unchecking them or clicking on the x next to each in the properties of the Map    * **Drag** the ‘ZIP’ property to ‘Location’ property of the Map | C:\Users\BretS\AppData\Local\Temp\SNAGHTML19314e47.PNG |
| 1. *We can use the ‘Color Saturation’ of the bubbles to reflect another property on our data. Let’s set it to reflect the Average Response Score.* 2. **Drag** the “**Response Score**” field to the “**Color Saturation**” Property of the Map 3. Set the value of Color saturation to the “Average of Response\_Score” by **clicking** on the **triangle** in the ‘Color saturation’ text box and **choosing** “**Average**”. 4. *The saturation of the bubbles now reflects the average response score.* | C:\Users\BretS\AppData\Local\Temp\SNAGHTML19357479.PNG |
| 1. *However, we can improve this visualization by changing the colors of the saturation.* 2. **Click** on the ‘Format’ Icon under Visualizations. It looks like a paint brush. 3. **Click** on the control next to ‘Diverging’ to turn ‘Diverging Colors’ to ‘On’ 4. **Set** the ‘Minimum’ to a Red color. Now notice the Bubbles in the Map plainly illustrate the Average Sentiment – by location. |  |

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| **Add the Table** | |
| 1. *Let’s add the table that showed the raw response data next to the Map.* 2. (Important) **Click** on the whitespace next to the Map. You need to make sure that the map is not selected, or when you try to add the Table, you will change the Map to a Table. Make sure you have selected the report itself. 3. **Click** on the “**Table**” icon under Visualizations. You can resize this to taste. 4. *Now we need to add the fields to the table* 5. **Check** the checkbox next to the following fields:    * UserID    * City    * Response    * Response\_Score 6. **Click** on any of the Bubbles in the Map and you will see that the Table is automatically filtered. |  |
| 1. *You can make the report a bit cleaner by adding a border to both the Map and the Table* 2. **Click** on the Table | Click on ‘Format’ 3. **Set** the ‘Border’ property to ‘On’ 4. **Repeat** for the Map 5. **Resize** the controls to taste |  |

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| **Add the Cards** | |
| 1. *Next we want to add in the individual cards. Cards are good for showing off important numbers. Let’s add cards for the following:*    * *Average of Response Score*    * *Max of Response Score*    * *Min of Response Score* 2. If you don’t have enough room for the cards on top of the Map and Table, **move** the Map and Table down and resize to taste. 3. Again, **make sure** you have selected whitespace in the report and not a specific control. 4. **Click** on the “**Card**” icon under ‘Visualizations’    * **Resize** the card to an appropriate size above the map – remember we will have 3 cards – so leave room.    * With the card selected, **check** “**Response\_Score**” from the Fields    * **Click** the triangle next to “**Response\_Score**” in the properties for the visualization and choose ‘Average’ 5. You can **add a border** to the card by clicking on the “**Format**” icon and Turning the “**Border**” on. Make sure the Card is selected while doing this. |  |
| 1. Create Max of Response Score Card    * **Copy** and **Paste** the Card you just created    * **Move** the newly pasted card to the center top of the report    * **Select** the Card    * **Click** the triangle next to “**Response\_Score**” in the properties for the visualization and choose “**Maximum**” 2. **Repeat** step 65 for **Minimum** of Response Score – moving it to the Top Right of the screen |  |

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| **Add the 2nd Page to the Report** | |
| 1. **Rename** “**Page 1**” to “**Sentiment by Zip**”    * Right-Click the “Page 1” tab at the bottom of the window    * Select “Rename” from the menu 2. **Double-Click** on the ‘Page 1’ Tab at the bottom of the screen. Delete ‘Page 1’ and type in ‘Sentiment by Zip’ 3. Add a new page to the report by **clicking** on the “**+**” button. 4. **Rename** the new page to “**Sentiment by Distance Travelled**” | C:\Users\BretS\AppData\Local\Temp\SNAGHTML1baebe9a.PNG C:\Users\BretS\AppData\Local\Temp\SNAGHTML1bb05b43.PNG  C:\Users\BretS\AppData\Local\Temp\SNAGHTML1bb24967.PNG |

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| **Add a Scatter Chart to the new Page** | |
| 1. **Click** anywhere on the new report page. 2. **Click** on “**Scatter Chart**” from the Visualizations. Resize appropriately. 3. *Remember that we want to plot ‘Average of Distance in Miles’ against ‘Average of Response Score’. This will tell us if there may be a correlation between distance and sentiment.* 4. **Drag** “**Response\_Score**” to “**X Axis**” and set it to “**Average**” by **clicking** on the **triangle** and **choosing** “**Average**” 5. **Drag** “**DistanceMiles**” to “**Y Axis**” and set it to “**Average**” by **clicking** on the **triangle** and **choosing** “**Average**” 6. **Drag** “**UserID**” to “**Size**” and set it to “**Count**” by **clicking** on the **triangle** and **choosing** “**Count**”. 7. **Drag** “**City**” to “**Legend**” 8. **Add** a border to the Scatter Chart |  |
| 1. **Copy** the Table from the “**Sentiment by Zip**” Page to this new page.    * **Click** on the “**Sentiment by Zip**” tab at the bottom of the page.    * **Click** on the Table visualization    * **Type** Ctrl+C    * **Click** on the “**Sentiment by Distance Traveled**” tab at the bottom of the page.    * **Click** on whitespace in the report page    * **Type** Ctrl+V 2. **Click** on any of the bubbles in the scatter chart and notice that the table is automatically filtering. |  |
| 1. **Copy** the Cards from the ‘Sentiment by Zip’ page to the ‘Sentiment by Distance Traveled’ page    * **Click** on the ‘Sentiment by Zip’ tab at the bottom of the page.    * **Select** each of the 3 cards at the top by holding down the Ctrl button and clicking each card    * **Type** Ctrl+C    * **Click** on the ‘Sentiment by Distance Traveled’ tab at the bottom of the page.    * **Click** on whitespace in the report page    * **Type** Ctrl+V    * **Position** the items properly |  |

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| **Change the filtering behavior** | |
| 1. **Click** on differing bubbles in the scatter chart. Notice that each of the cards and the Table are automatically filtered. 2. *Assume that you did not want the ‘Max of Response\_Score’ Card to be filtered when you clicked on the Scatter Chart.* 3. **Click** on the Scatter Chart 4. **Click** the “**Format**” ribbon tab along the top, the **Click** the “**Edit Interactions**” button. 5. **Click** on the “**None**” icon on the “**Max of Response\_Score**” Card 6. **Click** on the “Edit Interactions” button again to turn it off. 7. Now **click** on differing bubbles again in the scatter chart. Notice that the “**Max of Response\_Score**” card is no longer being filtered, while the other controls are. 8. To stop the filtering, **click** on **empty space** within the **Scatter Plot**. | C:\Users\BretS\AppData\Local\Temp\SNAGHTML1bc945ec.PNG |

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| **Save the Report** | |
| 1. From the “**File**” menu, **select** “**Save**” 2. **Name** the report “My Report”, or some other name that makes sense to you and save it in the same folder where you extracted the “AlteryxLabFiles.zip” file. 3. **Click** “**Save**” to save the report. | C:\Users\BretS\AppData\Local\Temp\SNAGHTML1bce1e96.PNG |
| **Log In to the Power BI Service** | |
| 1. *In the next section, you will publish the report you created up to the Power BI Service.* ***Before you can do that, we need to ensure that you can successfully log in to the Power BI Service with your Account.*** 2. *You need to have a valid Power BI account. You can either:*     * *Sign up for one of your own using a “corporate email address” (not an outlook.com, yahoo.com, gmail.com, etc. type of address) here:* [*https://powerbi.microsoft.com/en-us/get-started/*](https://powerbi.microsoft.com/en-us/get-started/)    * *Use one of the* [*DIADUserXXX@powercommunity.onmicrosoft.com*](mailto:DIADUserXXX@powercommunity.onmicrosoft.com) *accounts provided at the event.* 3. **Open** a **browser**, and go to **http://powerbi.usercom** , then **click** the “**Sign in**” button | C:\Users\BretS\AppData\Local\Temp\SNAGHTML1bd81926.PNG  C:\Users\BretS\AppData\Local\Temp\SNAGHTML1bdc43fc.PNG |
| 1. If you are prompted to update your password, do so. **MAKE SURE TO REMEMBER THE NEW PASSWORD**. | C:\Users\BretS\AppData\Local\Temp\SNAGHTML1bdd7538.PNG |
| 1. *Once you have successfully logged in, you should see the Power BI Service in the browser.* ***We don’t need to do anything else here right now, we just needed to make sure we could log in.*** |  |

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| **Publish the Report to the Power BI Service** | |
| 1. **Return** to **Power BI Desktop** and **ensure** that the **report** we created previously is **open**. 2. **Click** the “**Sentiment by Zip**” page to ensure it is the default page when the report is published. 3. **Click** the “**Home**” ribbon along the top, then **click** the “**Publish**” button. 4. In the “Sign in to Power BI” window, **click** “**Sign in**” | C:\Users\BretS\AppData\Local\Temp\SNAGHTML1be51f80.PNG |
| 1. **Login** with the credentials you just verified in the previous section. Remember that you may have had to change your password to something new. 2. When the publish succeeds, **click** the “**Open ‘My Report.pbix’ in Power BI**” link |  |
| 1. You should see your report open in the Power BI App in the browser. Verify that everything you created in the Power BI Desktop app is present and functional. |  |

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| **OPTIONAL – Open a Content Pack** | |
| **IF YOU WERE UNABLE TO PUBLISH IN THE PREVIOUS STEP, THIS WILL GIVE YOU A WAY TO CONTINUE WITH THE LAB WITH A PRE-EXISTING REPORT. YOU CAN FOLLOW THESE STEPS EVEN IF YOU SUCCUSSFULLY PUBLISHED IF YOU WOULD LIKE TO SEE HOW TO CONSUME A CONTENT PACK.** | |
| 1. *To use a “Content Pack” you need to upgrade your Power BI account to a “Pro” account by starting a free trial.* 2. **Return** to the browser and if necessary, **sign into** the <https://app.powerbi.com> service with your verified credentials. 3. **Click** the “**Gear**” icon in the top right corner, then select “Manage personal storage” to access your account settings. 4. **Click** the “**Try Pro for free**” button. | C:\Users\BretS\AppData\Local\Temp\SNAGHTML1c0f5615.PNG  C:\Users\BretS\AppData\Local\Temp\SNAGHTML1c0f904f.PNG |
| 1. **Click** the “**Start Trial**” button in the “Start 60-day free Pro trial” window. 2. **Click** “**Close**” to close the free trial confirmation. |  |
| 1. If the “Get Data” page is not being displayed, you can **click** the “**Hamburger Button**” in the top left corner, then **click** “**Get Data**”. |  |
| 1. On the “Get Data” page, click the under “**My organization**”, **click** the “**Get**” button 2. **Click** the “**Get**” button for the “**Alteryx Power BI**” content pack. |  |
| 1. *You should now see an “AlteryxPowerBI” Dataset, Report and Dashboard, and the Dashboard should be displayed. This is basically the same Dataset and Report we developed in this lab, and a copy of the Dashboard you will create in the following steps.* |  |

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| **Create a Dashboard** | |
| 1. *We can easily create a dashboard by selecting visuals from our reports.* 2. *For the following steps you can use your own Report that you published previously, or if needed you can use the “AlteryxPowerBI” report from the content pack we imported in the previous section. Click on the “Hamburger Button” along the left to open your workspace panel, and select the Report you want to continue with.* 3. **Navigate to** the ‘Sentiment by Zip’ Page of the report we just created. 4. **Click** on the ‘Pin’ icon for the Map to pin that visual to a report. 5. This will bring up a dialog box. You have the option to either choose an existing dashboard or create a new dashboard. In our case, **choose** ‘New Dashboard’ and name it something like ‘My Dashboard’ 6. **Repeat** the same steps for the following visuals, adding them to the same report:    * All 3 cards on ‘Sentiment by Zip’    * The Table on ‘Sentiment by Zip’    * The Scatter Chart on ‘Sentiment by Distance Traveled’ |  |
| 1. **Navigate to** ‘My Dashboard’ (or whatever you named your dashboard. 2. **Drag and drop** the items so they match the dashboard pictured to the right. Keep in mind that you will have to resize the map. 3. *Congratulations, you have now created a report and a dashboard!* 4. *Next, it is time to share your dashboard…* |  |

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| **Share your Dashboard** | |
| 1. *There are a several ways for you to share dashboards, reports and tiles.* 2. *The first is to simply share it via email.* 3. **Click** on the ‘Share’ link at the top right of the dashboard. 4. This will bring up a dialog. 5. **Select** ‘Invite’ and type the email addresses in the top box and, optionally, modify the message. 6. *If any of the addresses is outside your organization, you'll see a warning.* 7. *To allow your colleagues to reshare your dashboard with others, check Allow recipients to share your dashboard. Only colleagues in your organization can reshare your dashboard. People outside your organization can view your dashboard but not reshare it.* 8. **Select** Share – if you really want to share this dashboard. |  |
| 1. *Another way to share is to create ‘Content Packs’* 2. *Content Packs allow you to publish reports and dashboards to: the entire organization, to distribution or security groups or office 365 groups.* 3. *Content packs are easily discoverable.* 4. To see how easy it is to find Content Packs, do the following:    * **Click** on ‘Get Data’ at the bottom left of the screen    * **Click** on ‘Get’ under ‘My Organization’    * There you will see a list of Content Packs that are available to you. |  |

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| **Q & A in Power BI – Using Natural Language Query** | |
| 1. *Sometimes the fastest way to get an answer from your data, is to ask a question using natural language. For example, "what were total sales last year." Use Q&A to explore your data using intuitive, natural language capabilities and receive answers in the form of charts and graphs. Q&A is different from a search engine -- Q&A only provides results about the data in Power BI.* 2. To start, in your dashboard, **click** where it says to ‘Ask a question about your data. |  |
| 1. **Start by typing**: ‘Average response score’ |  |
| 1. **Update** it to be ‘Average response score by zip’ |  |
| 1. **Update** it to be ‘Average response score by zip as Map’ |  |
| 1. Continue asking your own questions of the data |  |