May 13, 2016: IBM Watson User Guide

In this IBM Watson User Guide, you will create dashboards and utilitize the following capabilities: Exploring, Predicting, and Collecting.

Contents

Administration:

First, you will need to sign up for IBM Watson Analytics

    a. Visit the website: http://www.ibm.com/analytics/watson-analytics/us-en/

    b. Sign up by clicking the "Try it for free" button.

    c. After signing up, start the app.

Second, Download Excel file: "Computations.xlsx" (Download link: http://www.nvc.vt.edu/rmajor/bit5534/Docs/Computations.xlsx)
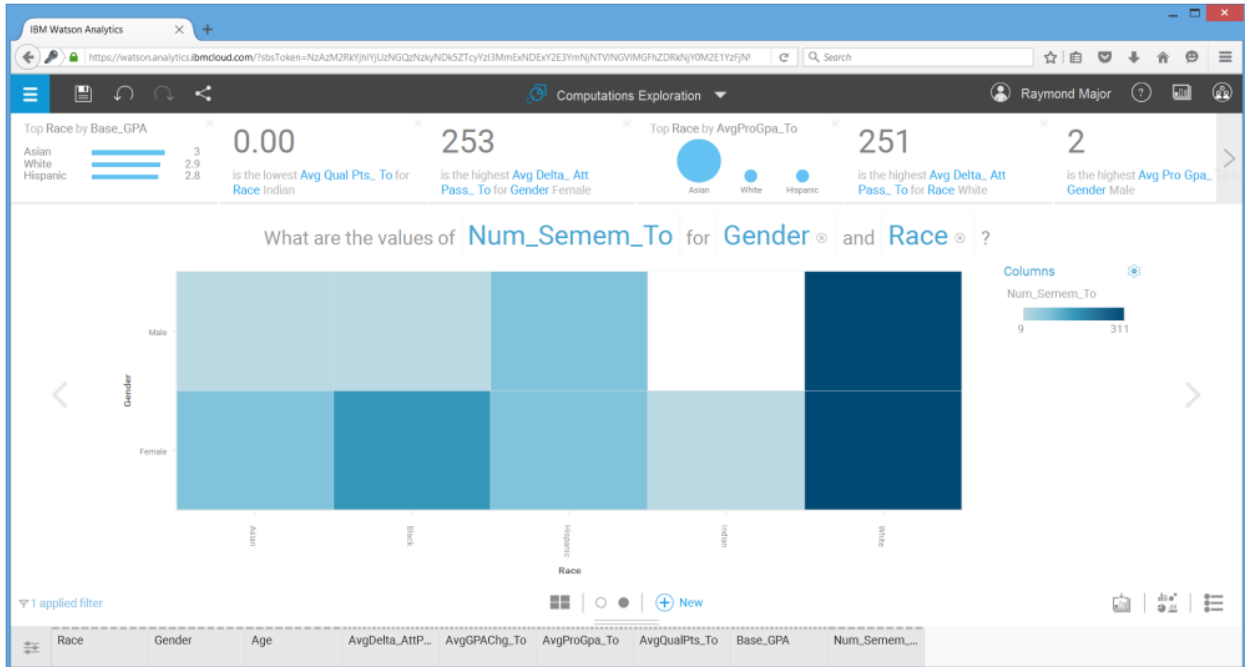
Dashboards to Build: Exploring

Below will be a sequence of instructions on creating the exact dashboards below (and as shown on the website http://www.nvc.vt.edu/rmajor/bit5534/Dashboards.htm:

IBM: Dashboard for Exploring Watson
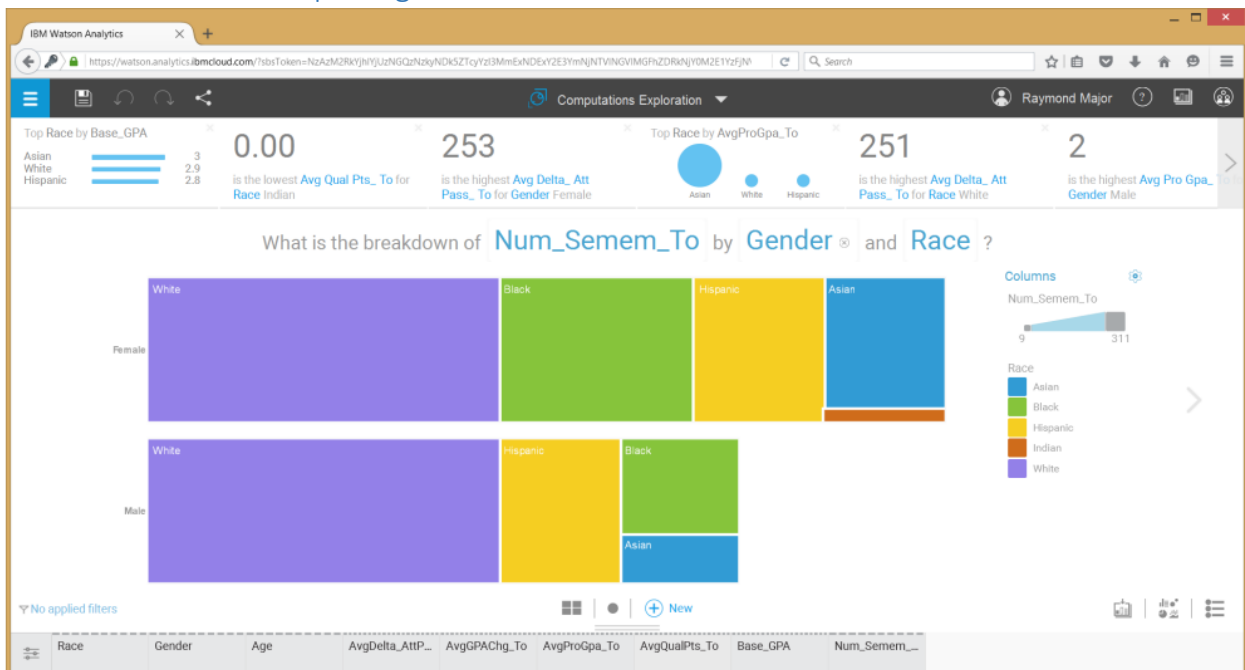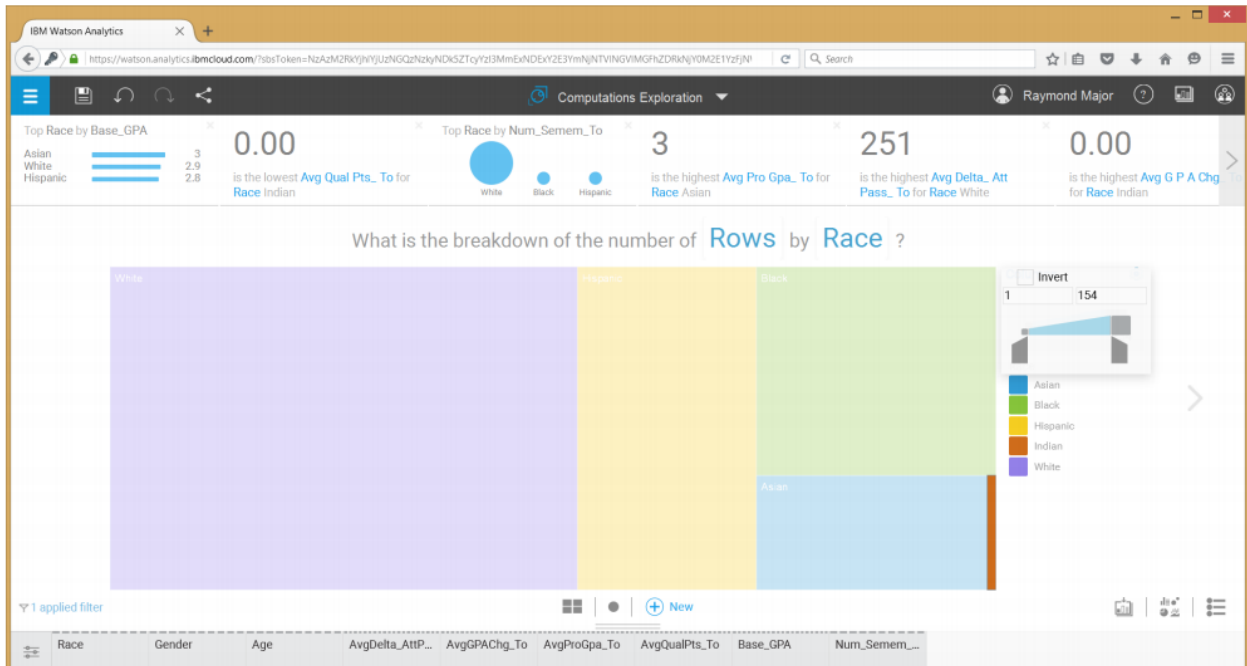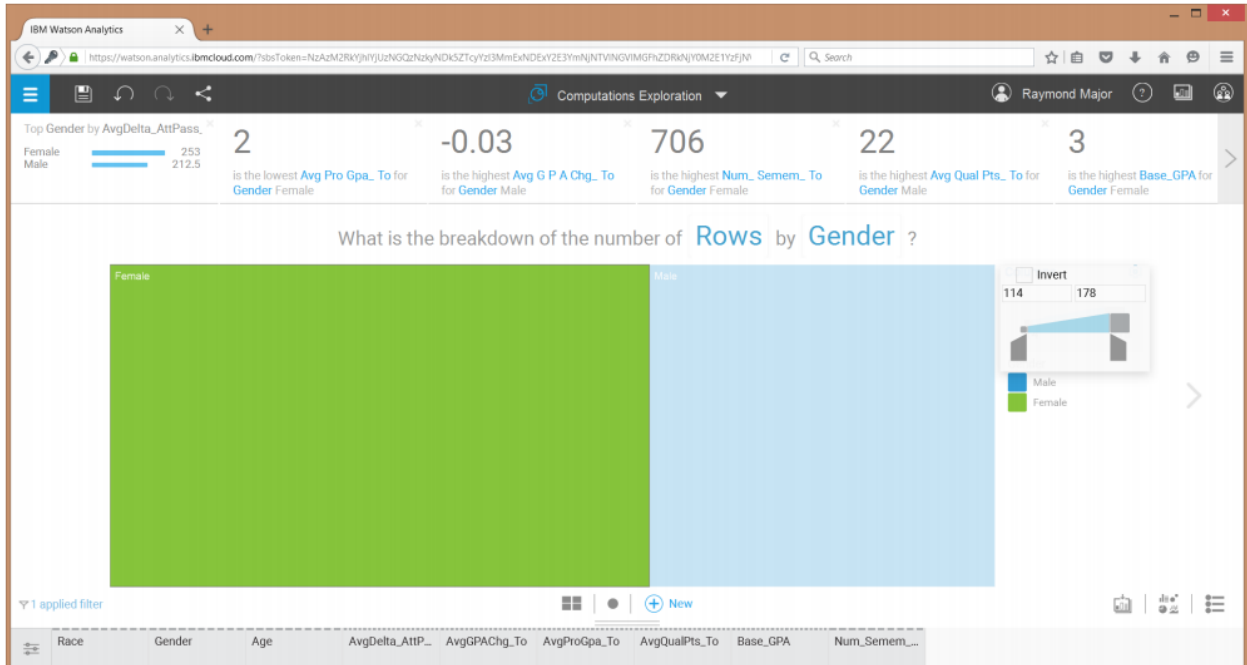
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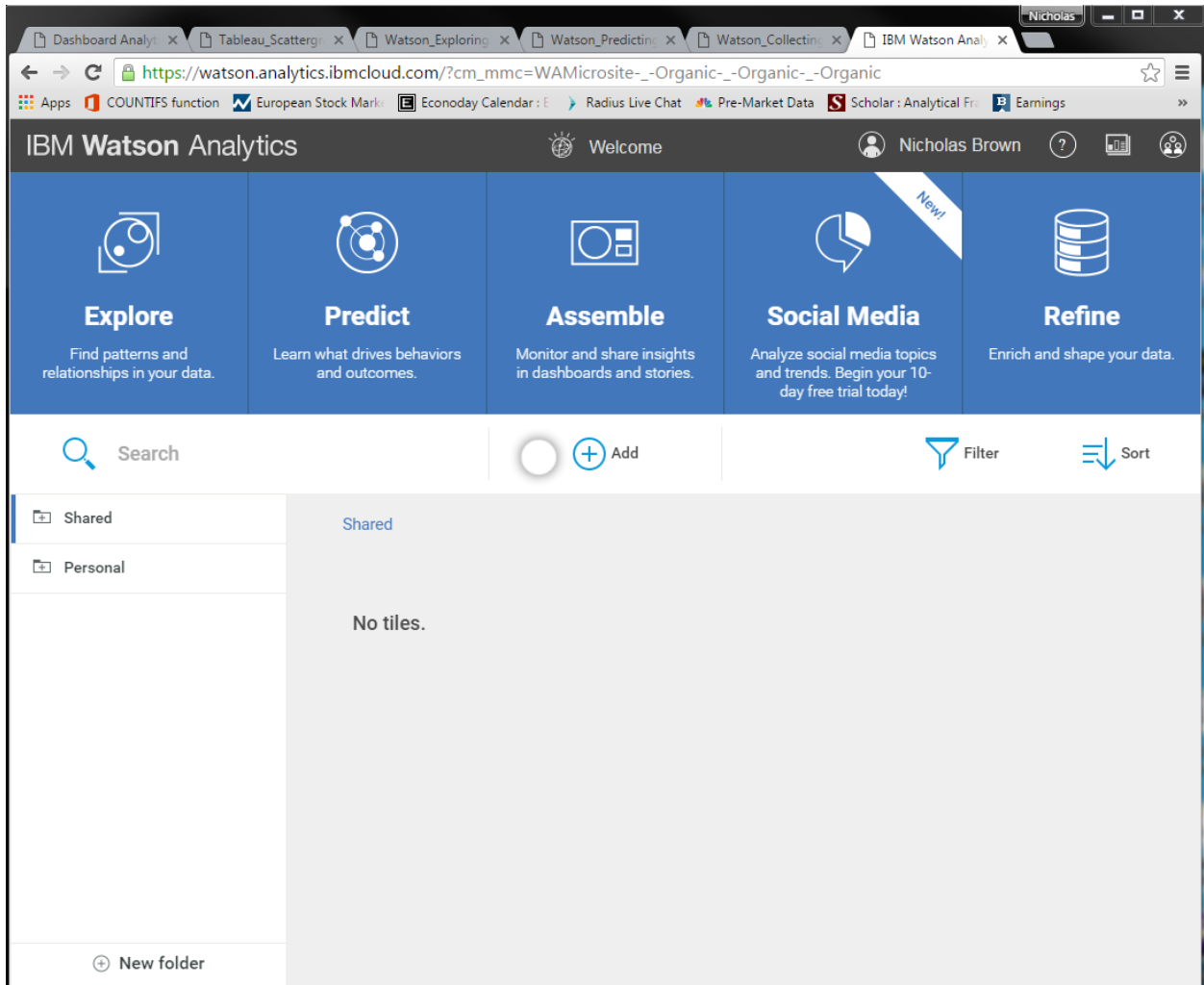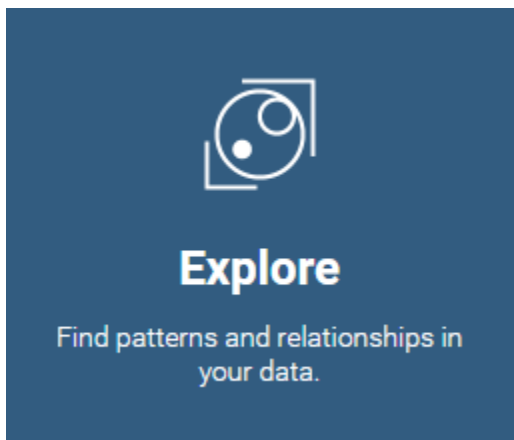
Above are the dashboards as displayed on the course website:
http://www.nvc.vt.edu/rmajor/bit5534/Docs/Watson_Exploring.pdf

## Dashboard: Num_Semem_To by Gender and Race?

Step 1: Go to IBM Watson Analytics website.


2: Click on "Explore" at the top left corner.

3: The "Create new exploration" window will appear. Click on "Drop file or browse" at the bottom left side corner and locate the downloaded "Computations.xlsx" file. (Visit this page if you need to download: http://www.nvc.vt.edu/rmajor/bit5534/Docs/Computations.xlsx)
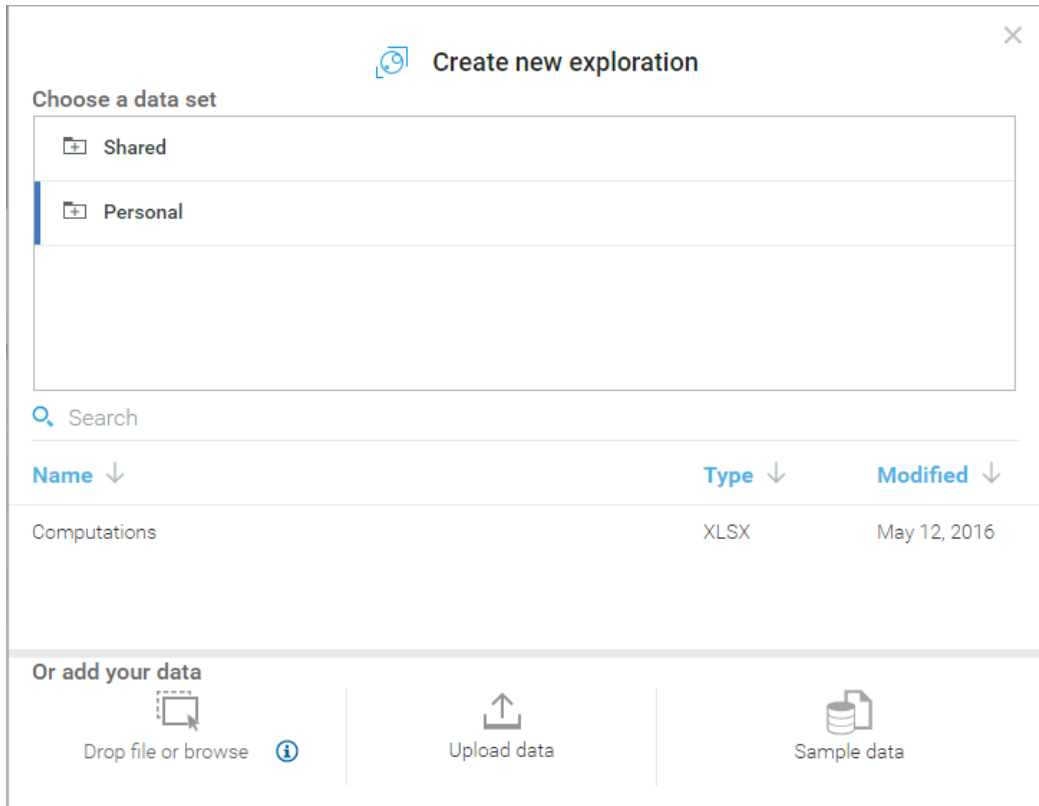

4: Then choose which worksheet you would like to use, and keep the default sheet "The_Student_Data." Click Confirm:
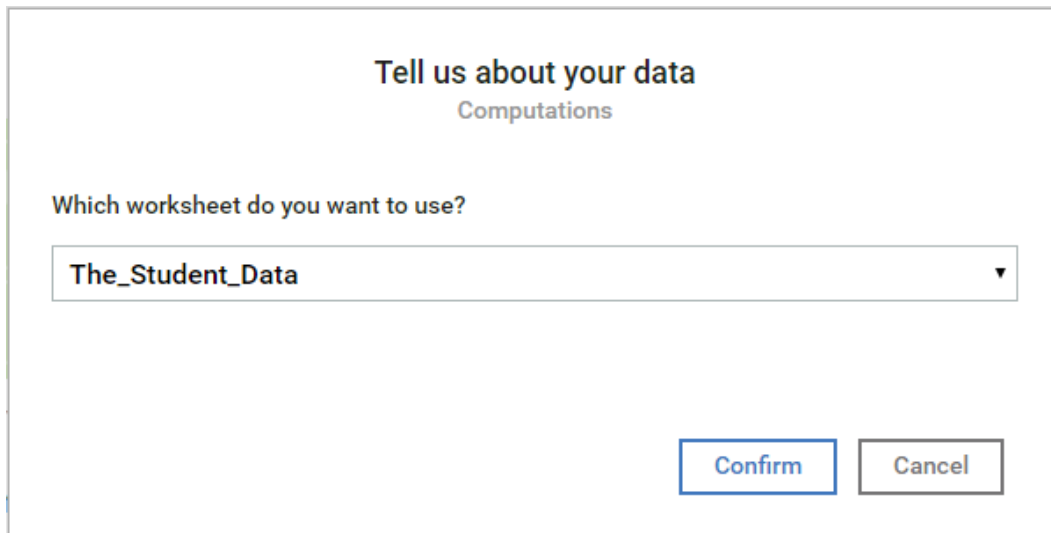
5: The file will load and when ready, choose the Data Set, entitled, "Computations" on your home screen:
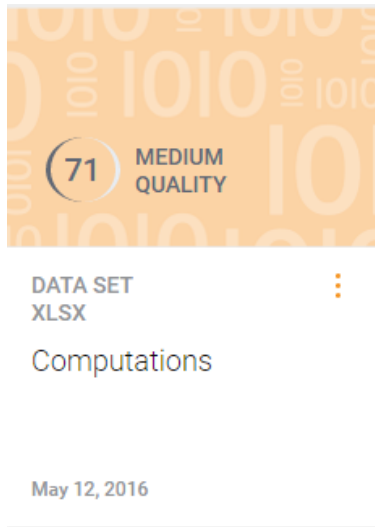
6: The "Here are some starting ponts for 'Computations' " wizard will appear. Choose the third option entitled, "What is the breakdown of **AvgProGPA_To** by **Gender** and **Race**?":
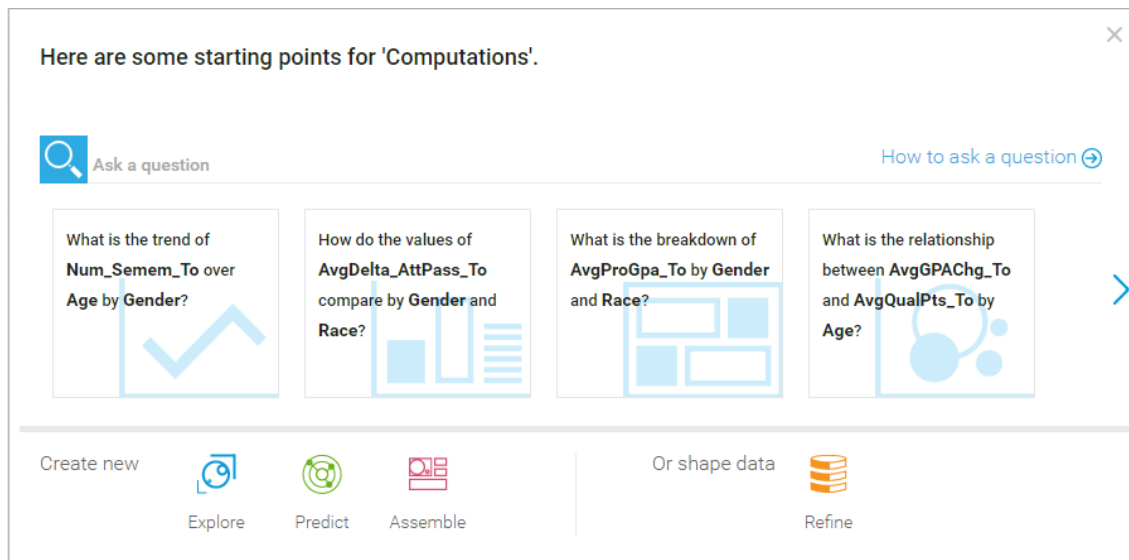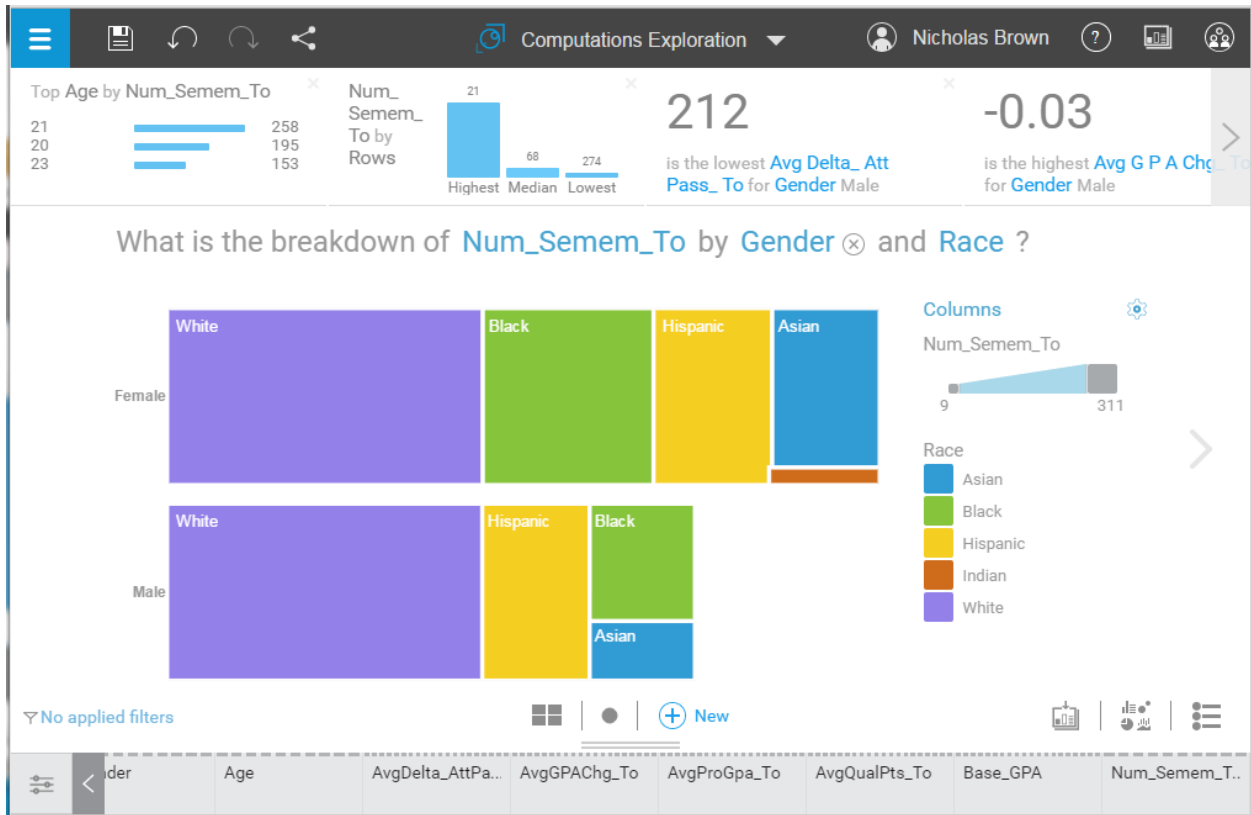

7: Now replace "AvgProGpa_To" in the question prompt:

By clicking on it and selecting "Num_Semem_To". The question should now read as follows:

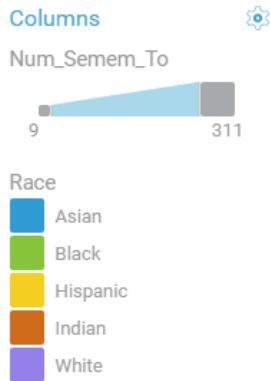8. The final product will appear as follows:

Dashboard: Breakdown of the number of Rows by Gender?

This assumes you have already created the first dashboard and will now progress to the next one. If you have not completed the first dashboard, then re-visit the instructions above and import the data. When the 'exploration question prompt' appears, follow the below instructions.

Step 1: Click on the side arrow located to the right of the dashboard results.

Columns

Num_Semem_To

9   311

Race

Asian

Black

Hispanic

Indian

White

2: A new exploration question prompt will appear:

What do you want to explore next?

Here are some starting points.   Ask a question

| What is the trend of Num_Semem_To over Age by Gender? | How do the values of AvgDelta_AttPass_To compare by Gender and Race? | What is the breakdown of AvgProGpa_To by Gender and Race? | What is the relationship between AvgGPAChg_To and AvgQualPts_To by Age? |

| What are the values of AvgGPAChg_To for each Age? | What are the connections between Race and Age? | What are the most common values of Age? | What is the contribution of Num_Semem_To over Age by Gender? |

| How do the values of Num_Semem_To compare by Gender and Race? | What are the values of Num_Semem_To for Gender and Race? |

○ | ⊕ New

3: Select "What is the breakdown of **AvgProGpa_To** by **Gender** and **Race**?"

4: Now replace "AvgProGpa_To" in the question prompt:

By clicking on it and selecting "Rows" (*You will have to navigate thru to find 'Rows'*). The question should now read as follows:

5: Now delete **Gender** ⊗ by clicking on the ⊗ button and replace **Race** with **Gender** and the question should read as follows:

6: This is what the final dashboard will look like:
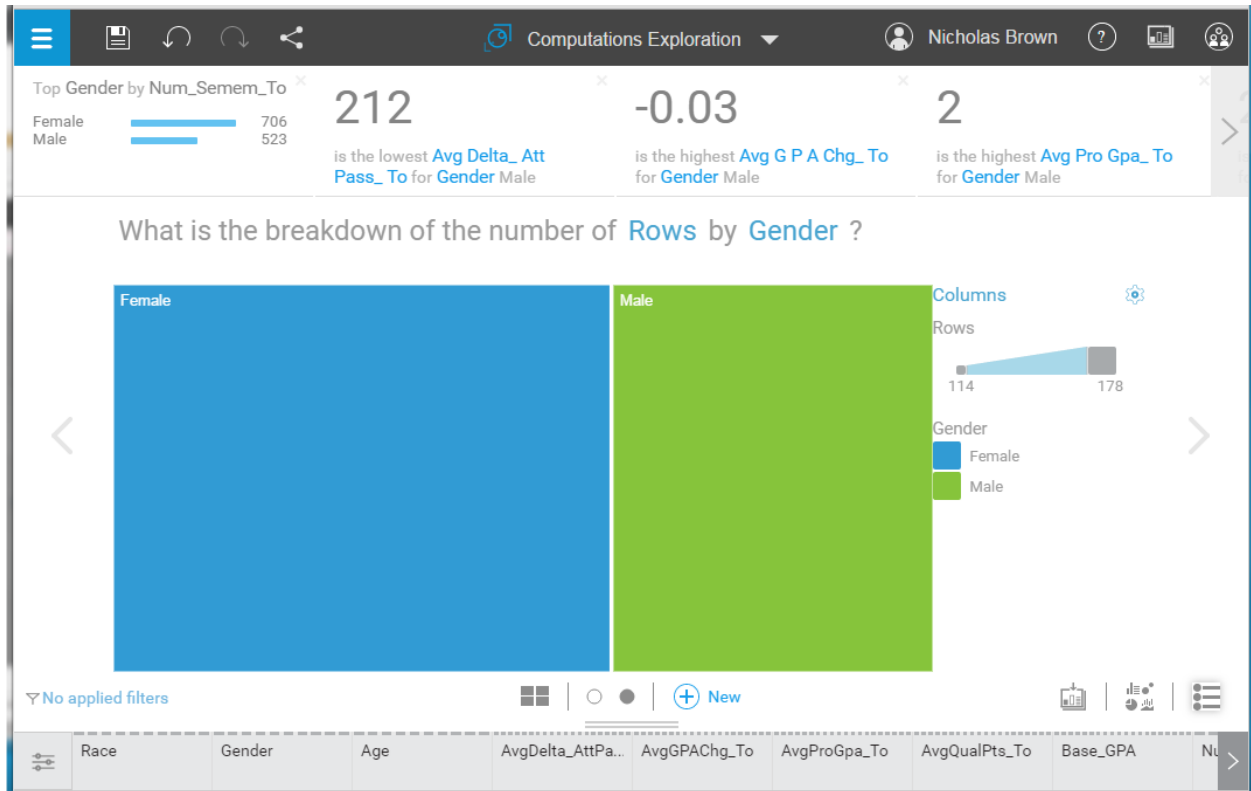
Dashboard: Breakdown of the number of Rows by Race?

This assumes you have already created the previous dashboards and will now progress to the next one. If you have not completed the first dashboard, then re-visit the instructions above and import the data. When the 'exploration question prompt' appears, follow the below instructions.

Step 1: Click on the side arrow located to the right of the dashboard results.

Columns

Rows

114   178

Gender
Female
Male

2: A new exploration question prompt will appear:

What do you want to explore next?

Here are some starting points.   Ask a question

What is the trend of   How do the values of   What is the breakdown of   What is the relationship
Num_Semem_To over Age   AvgDelta_AttPass_To   AvgProGpa_To by Gender   between AvgGPAChg_To
by Gender?   compare by Gender and   and Race?   and AvgQualPts_To by Age?
                              Race?

What are the values of   What are the connections   What are the most   What is the contribution of
AvgGPAChg_To for each   between Race and Age?   common values of Age?   Num_Semem_To over Age
Age?   by Gender?

How do the values of   What are the values of
Num_Semem_To compare   Num_Semem_To for Gender
by Gender and Race?   and Race?

○ | ⊕ New

3: Select "What is the breakdown of **AvgProGpa_To** by **Gender** and **Race**?"

What is the breakdown of AvgProGpa_To by Gender and Race?

4: Now replace "AvgProGpa_To" in the question prompt:

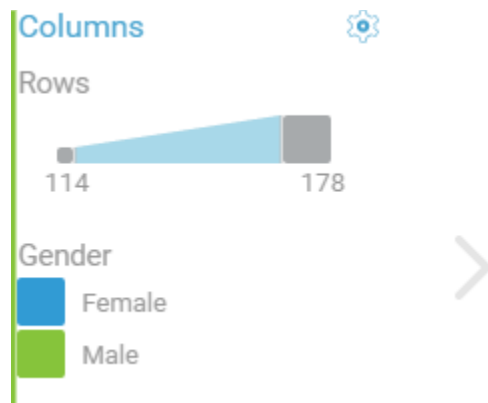What is the breakdown of AvgProGpa_To by Gender ⊗ and Race ?

By clicking on it and selecting "Rows" (*You will have to navigate thru to find 'Rows')*. The question should now read as follows:

What is the breakdown of the number of Rows by Gender ⊗ and Race ?

5: Now delete Gender ⊗ by clicking on the ⊗ button and the question should read as follows:

What is the breakdown of the number of Rows by Race ?

6: This is what the final dashboard will look like:
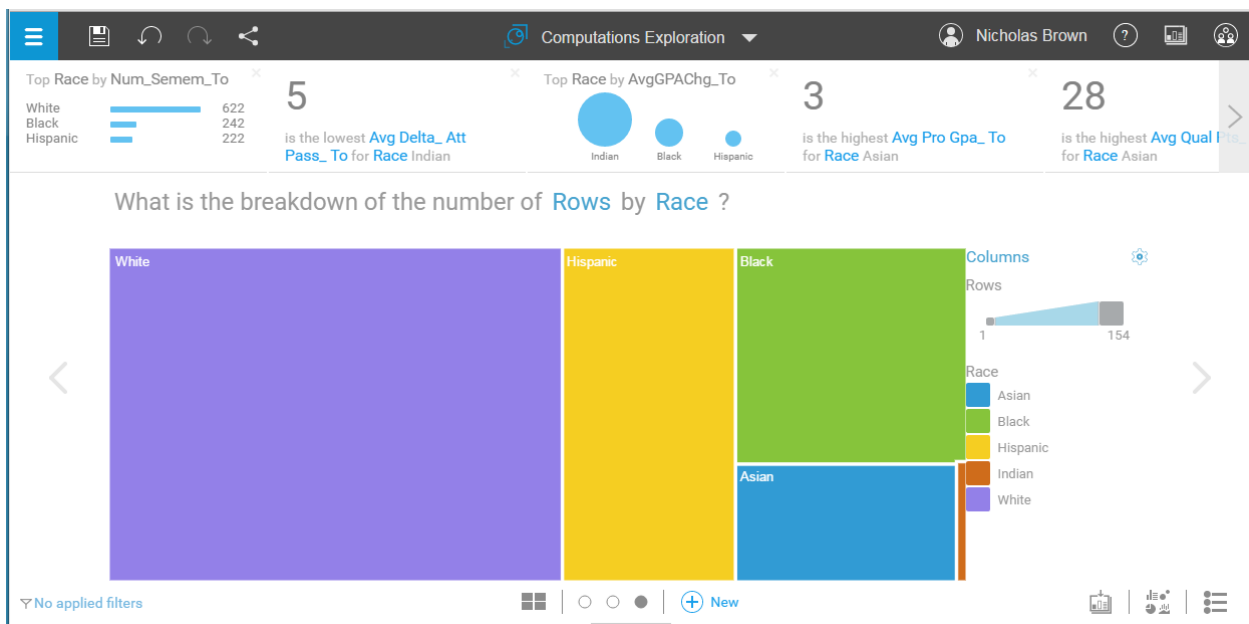
Dashboard: values of Num_Semem_To for Gender and Race?

This assumes you have already created the previous dashboards and will now progress to the next one. If you have not completed the first dashboard, then re-visit the instructions above and import the data. When the 'exploration question prompt' appears, follow the below instructions.

Step 1: Click on the side arrow ⟩ located to the right of the dashboard results.

Columns ⚙

Rows
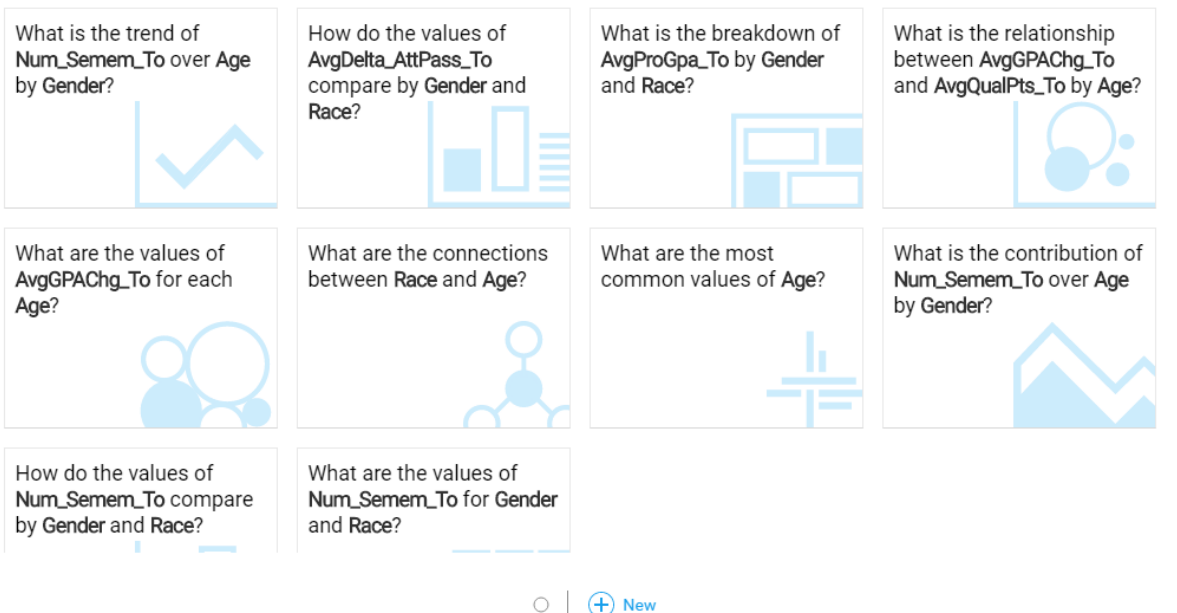
1   154

Race

- 🟦 Asian
- 🟩 Black
- 🟨 Hispanic
- 🟧 Indian
- 🟪 White

2: A new exploration question prompt will appear:

What do you want to explore next?

Here are some starting points.   Ask a question 🔍

What is the trend of Num_Semem_To over Age by Gender?	How do the values of AvgDelta_AttPass_To compare by Gender and Race?	What is the breakdown of AvgProGpa_To by Gender and Race?	What is the relationship between AvgGPAChg_To and AvgQualPts_To by Age?
What are the values of AvgGPAChg_To for each Age?	What are the connections between Race and Age?	What are the most common values of Age?	What is the contribution of Num_Semem_To over Age by Gender?
How do the values of Num_Semem_To compare by Gender and Race?	What are the values of Num_Semem_To for Gender and Race?		

○ | ⊕ New

3: Select "What are the values of **Num_Semen_To** for **Gender** and **Race**?"
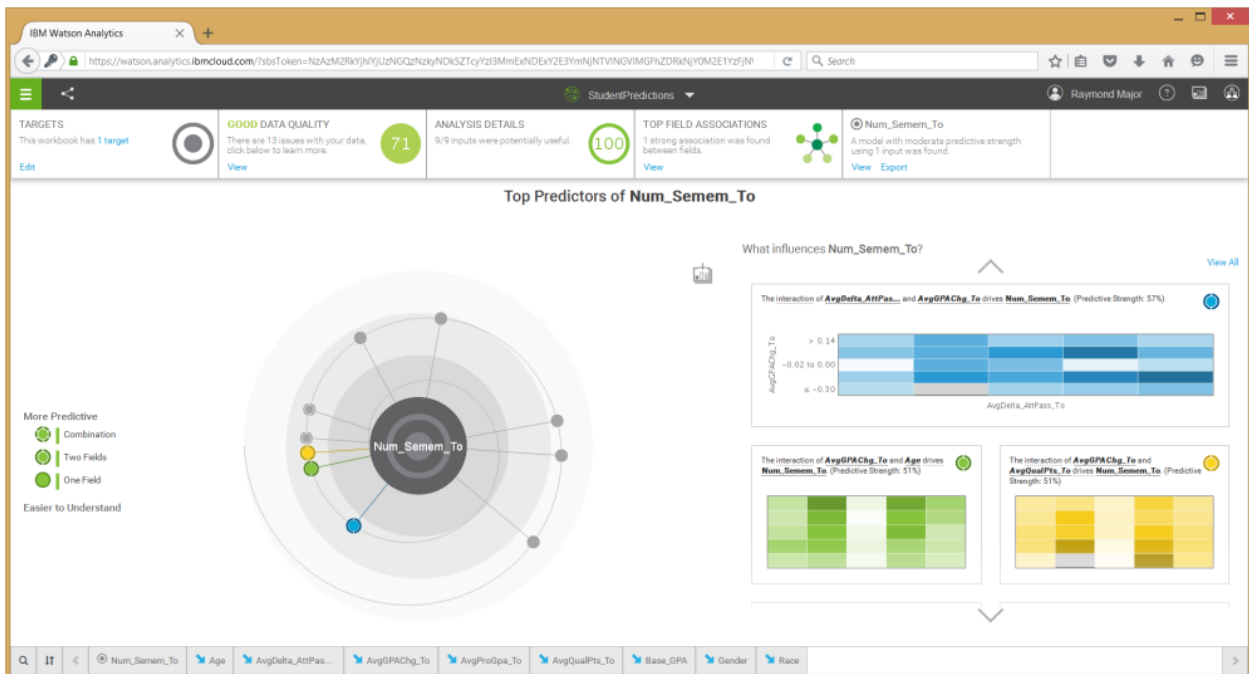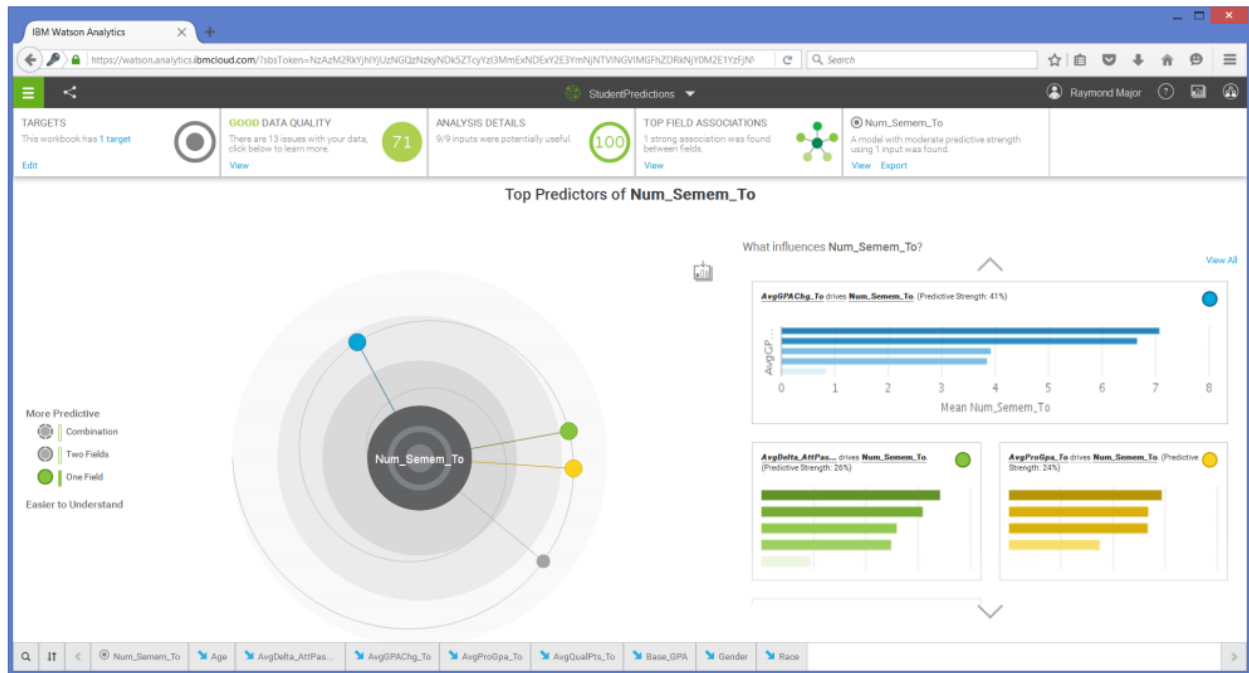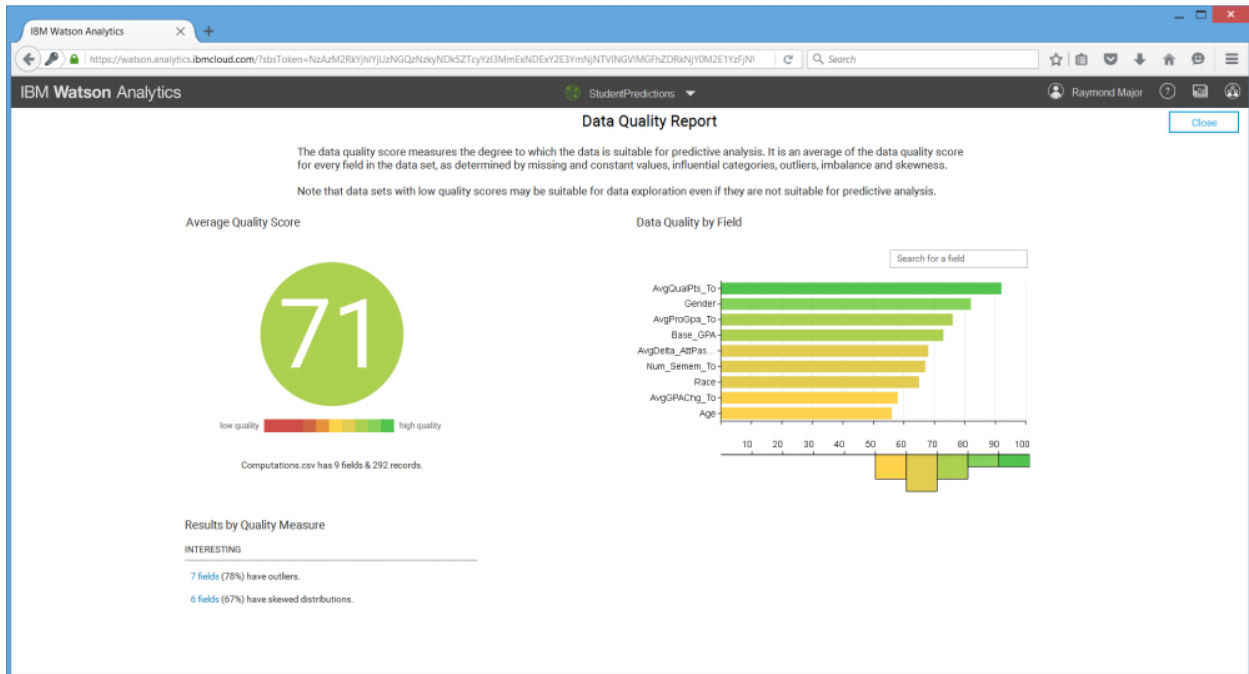

4: This is what the final dashboard will look like:
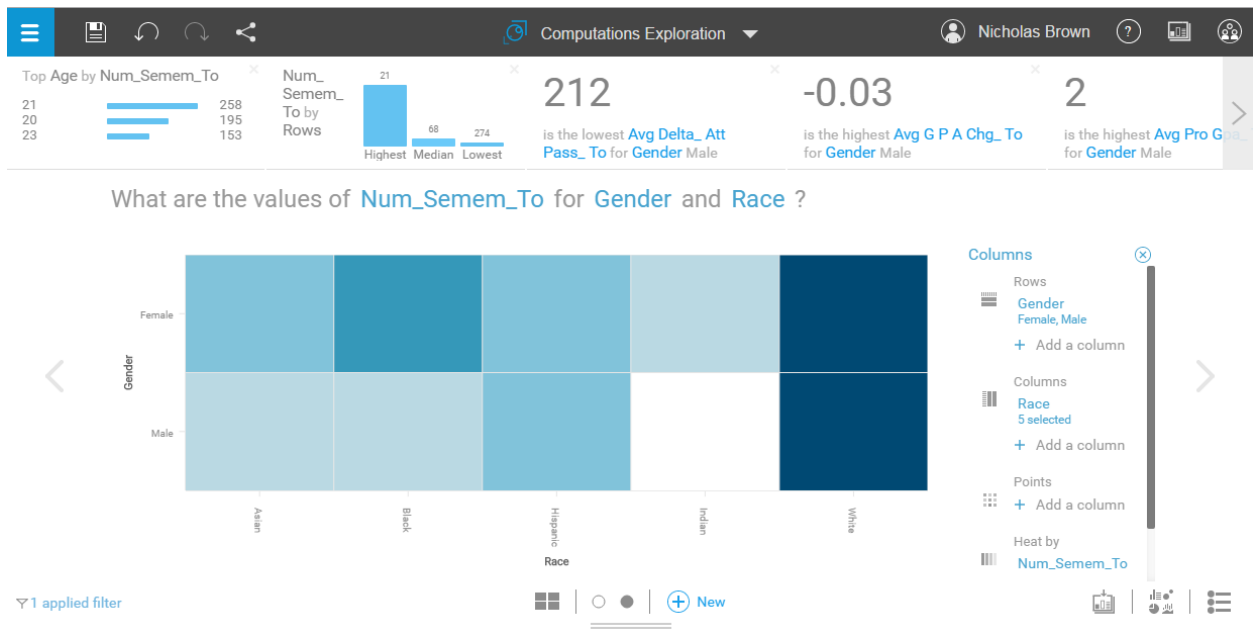
Dashboards to Build: Predicting

Below will be a sequence of instructions on creating the exact dashboards below (and as shown on the website http://www.nvc.vt.edu/rmajor/bit5534/Dashboards.htm:
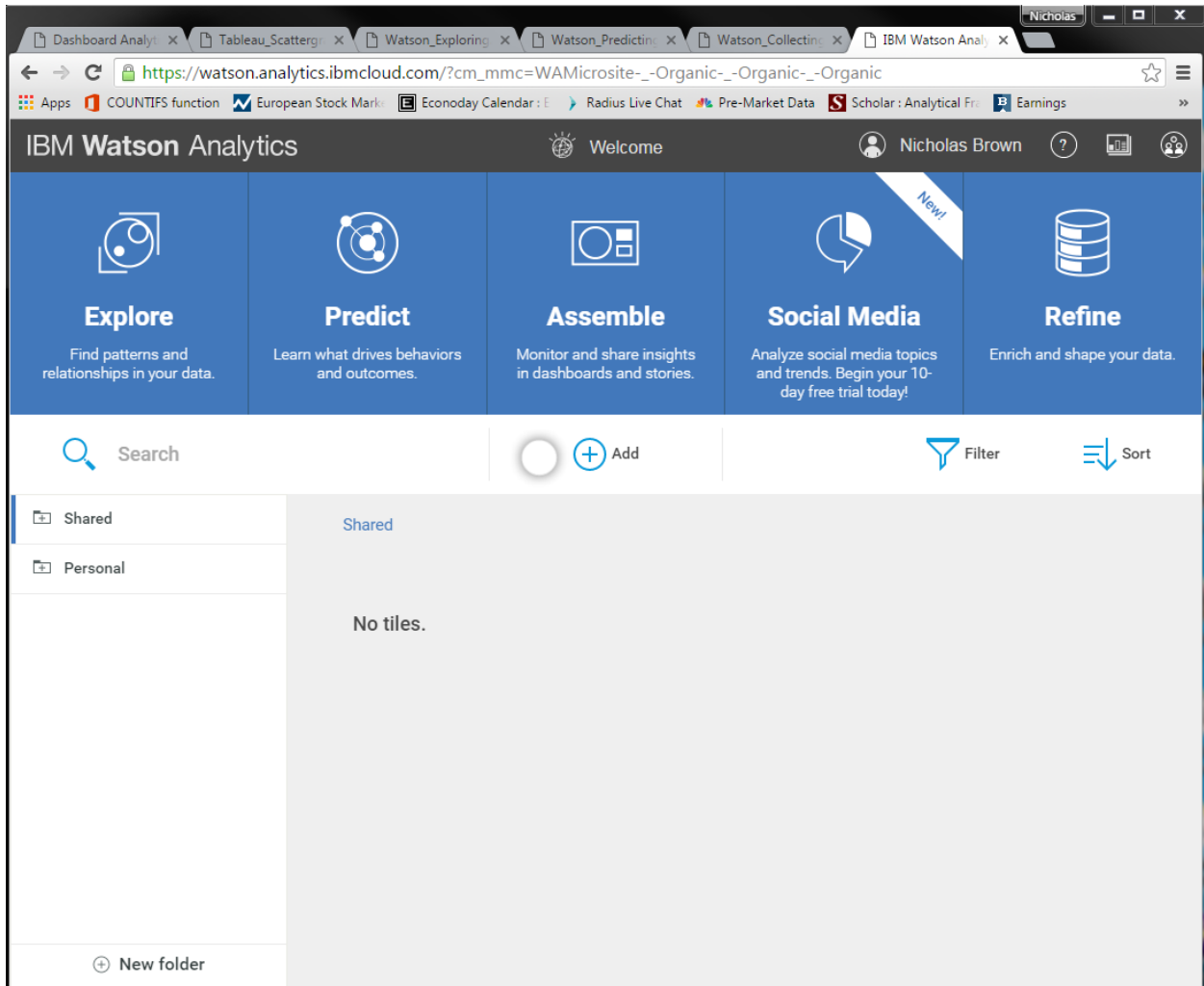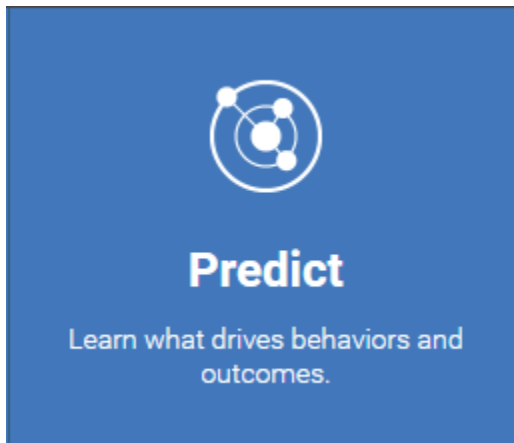
IBM: Dashboard for Watson Predictions

Above are the dashboards as displayed on the course website:

http://www.nvc.vt.edu/rmajor/bit5534/Docs/Watson_Predicting.pdf

Dashboard: Top Predictors of Num_Semem_To

Step 1: Go to IBM Watson Analytics website.

2: Click on the "Predict" at the top left corner.

3: The "Create new prediction" window will appear. Click on "Drop file or browse" at the bottom left side corner and locate the downloaded "Computations.xlsx" file. (Visit this page if you need to download: http://www.nvc.vt.edu/rmajor/bit5534/Docs/Computations.xlsx)

4: Enter the (1) Name of your Workbook as "StudentPredictions" and (2) keep the default selection of "Num_Semem_to" as the target, then click "Create":

5: The file will load while creating a new workbook.

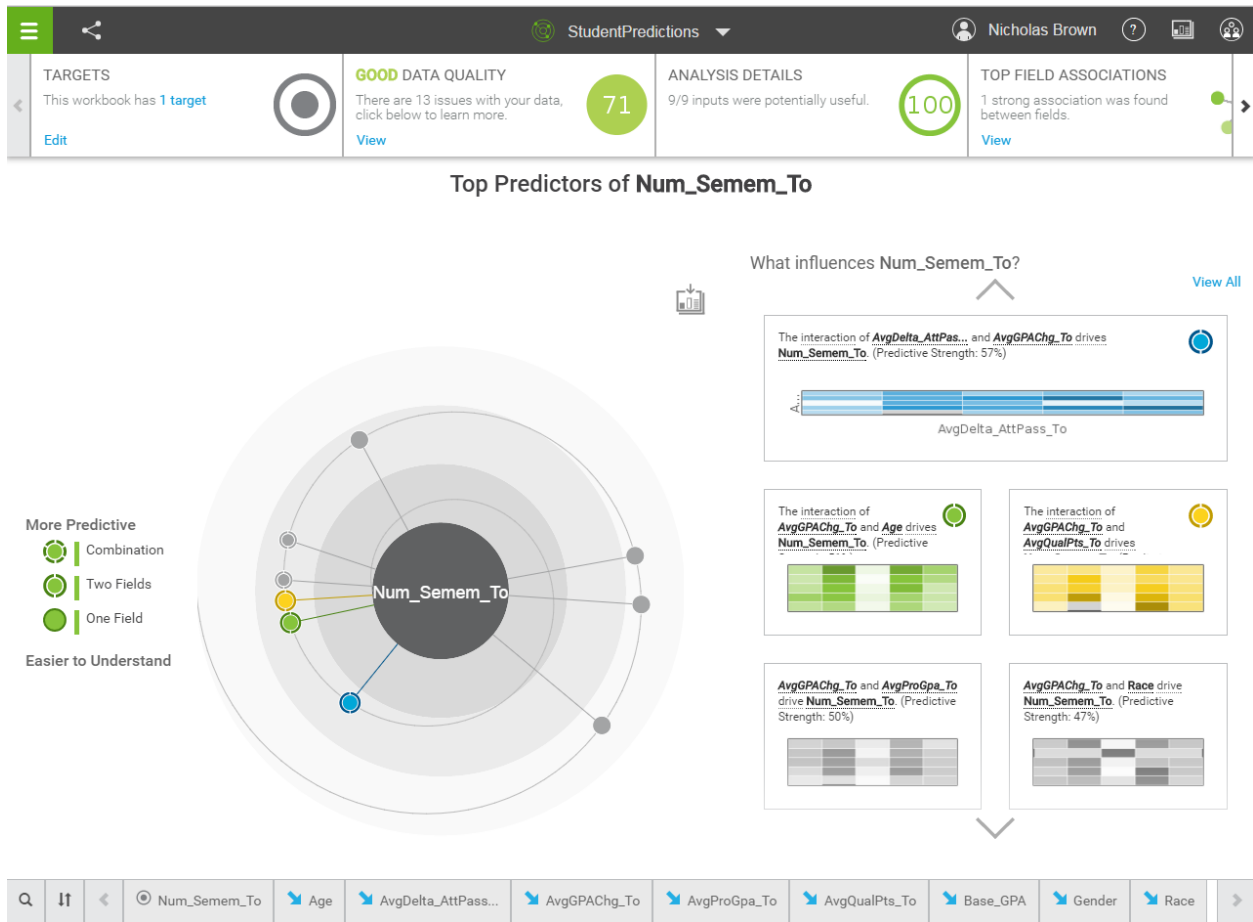6: Your first prediction model will appear as follows:
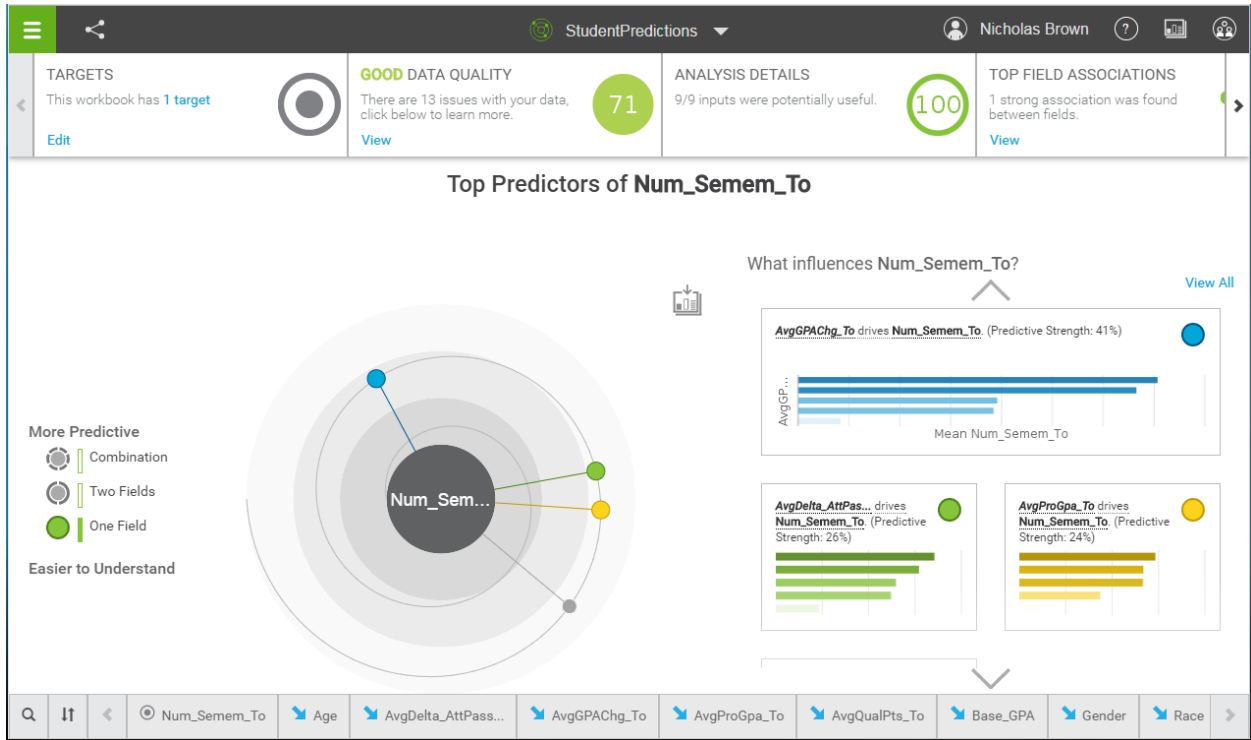
7: Now click on and highlight the following buttons "Two Fields" and "Combinations", located on the left side, to generate the next prediction model:

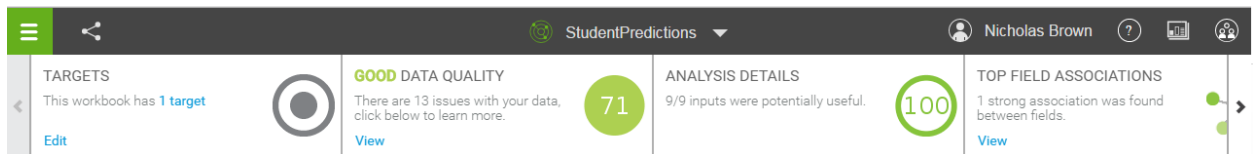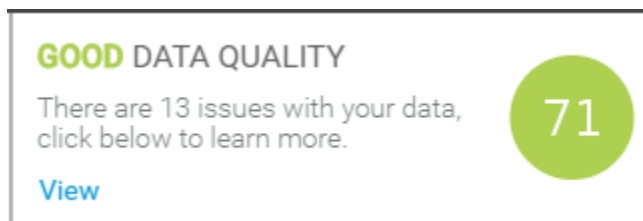8. The second model appears as follows:

9: Now locate the ribbon on the top of the page:

10: Select the "Good Data Quality" option by clicking "View":
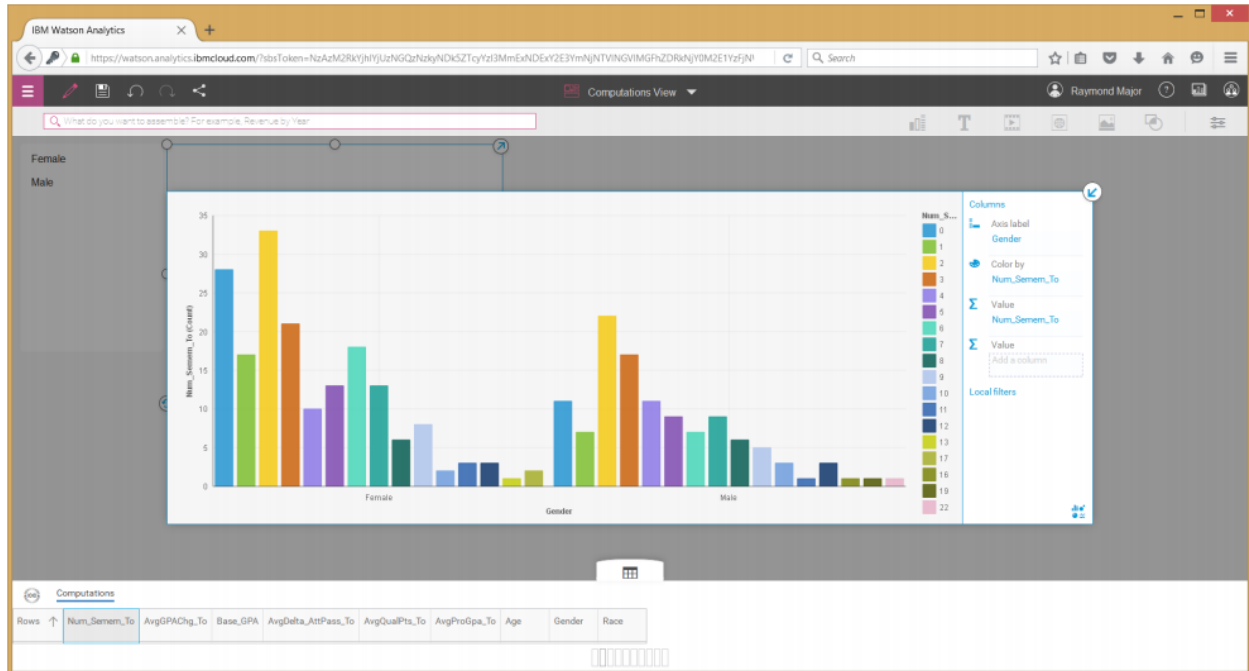
11: The final dashboard screen describes the quality of the data:

Dashboards to Build: Collecting (Assembling)

Below will be a sequence of instructions on creating the exact dashboards below (and as shown on the website http://www.nvc.vt.edu/rmajor/bit5534/Dashboards.htm:

IBM: Dashboard for Watson Collecting (Assembling):
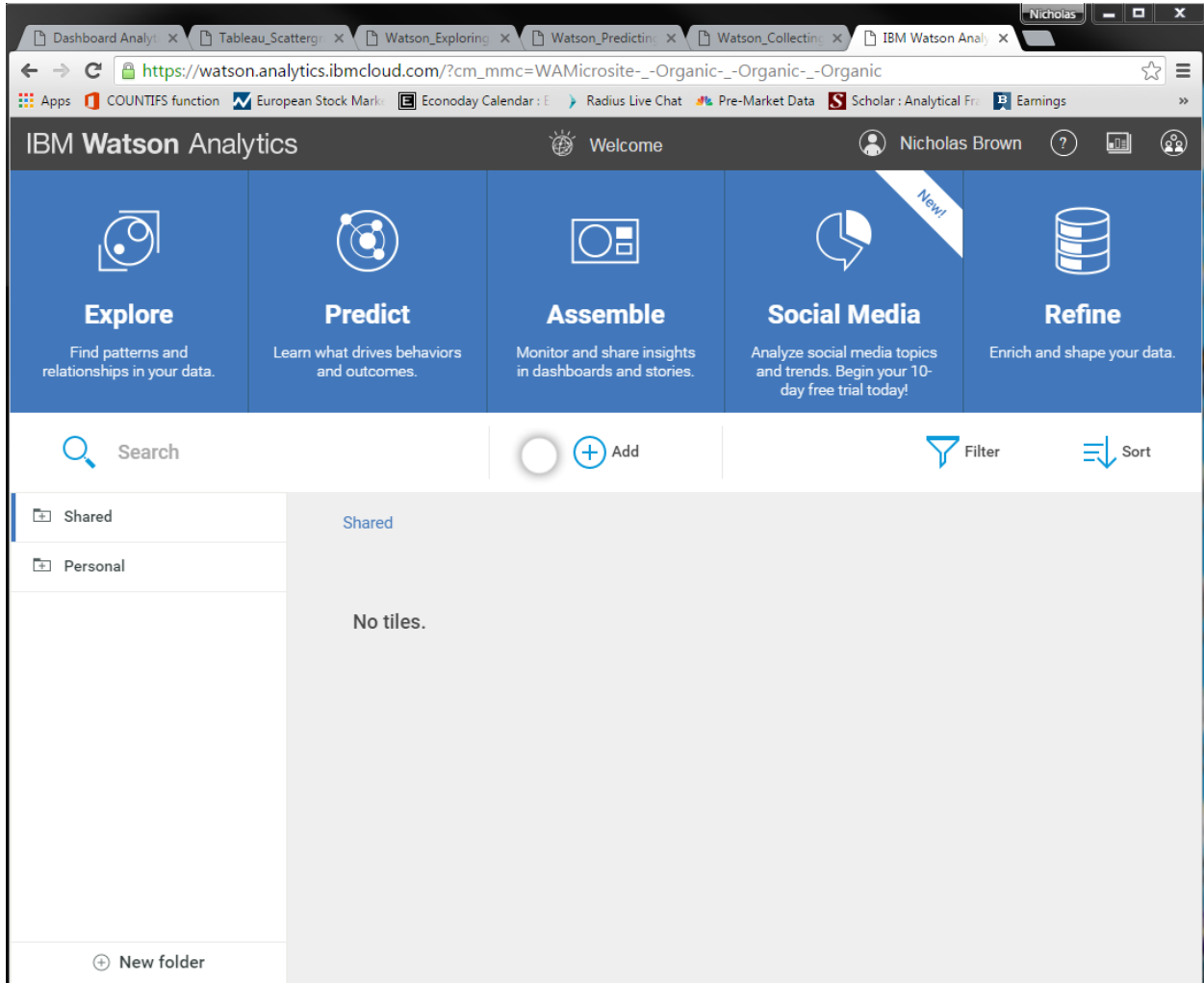

Above is the dashboard as displayed on the course website:
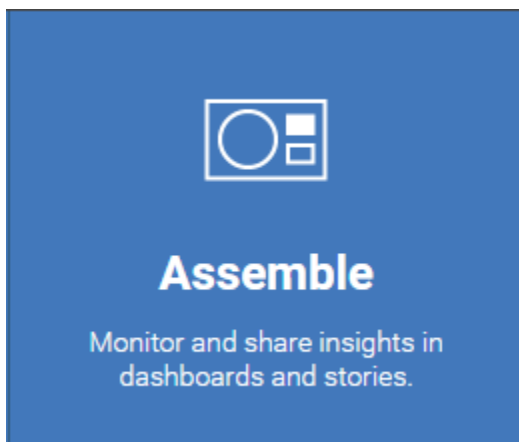http://www.nvc.vt.edu/rmajor/bit5534/Docs/Watson_Collecting.pdf

Dashboard: Colored Barchart

Step 1: Go to IBM Watson Analytics website.

2: Click on "Assemble," located in the upper center ribbon.

3: The "Create new view" window will appear. Click on "Drop file or browse" at the bottom left side corner and locate the downloaded "Computations.xlsx" file. (Visit this page if you need to download: http://www.nvc.vt.edu/rmajor/bit5534/Docs/Computations.xlsx) or you can click on the existing file previously loaded.
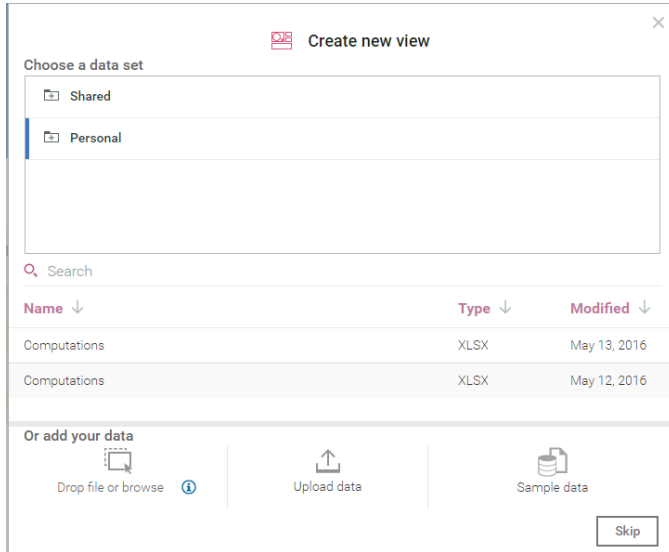
4: You can keep the default name of "Computations View" and then click "Freeform" under Tabbed Layout. Once it is highlighted, click on "Create" located at the top right:
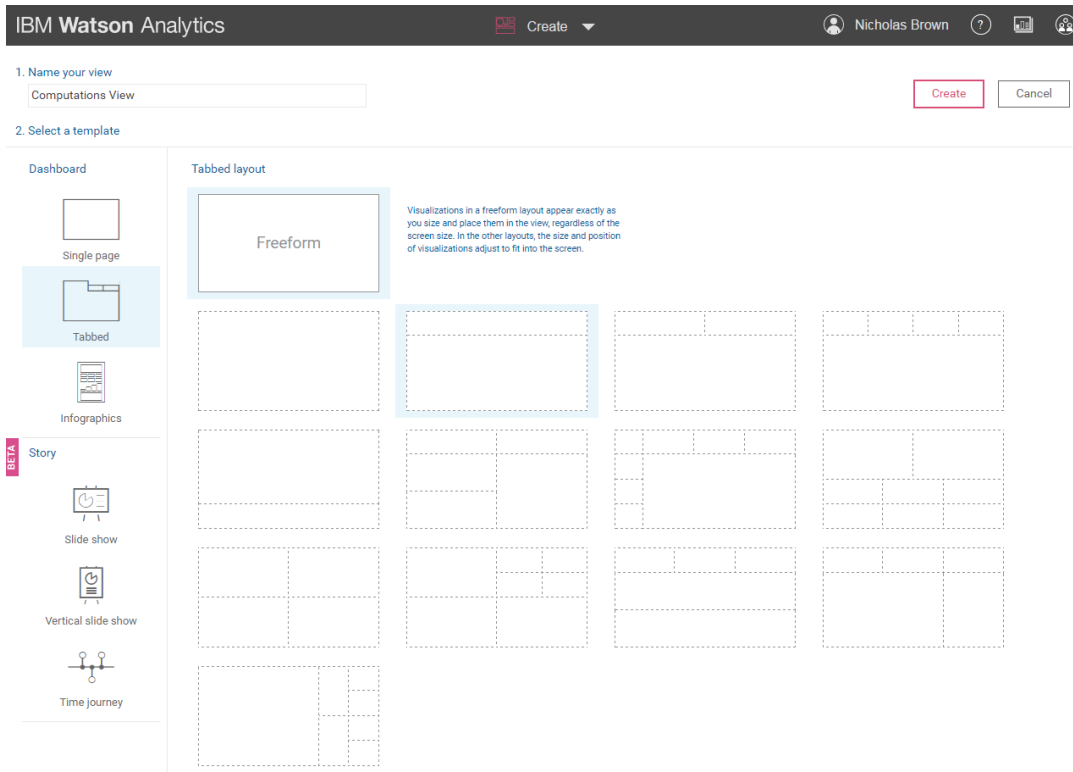
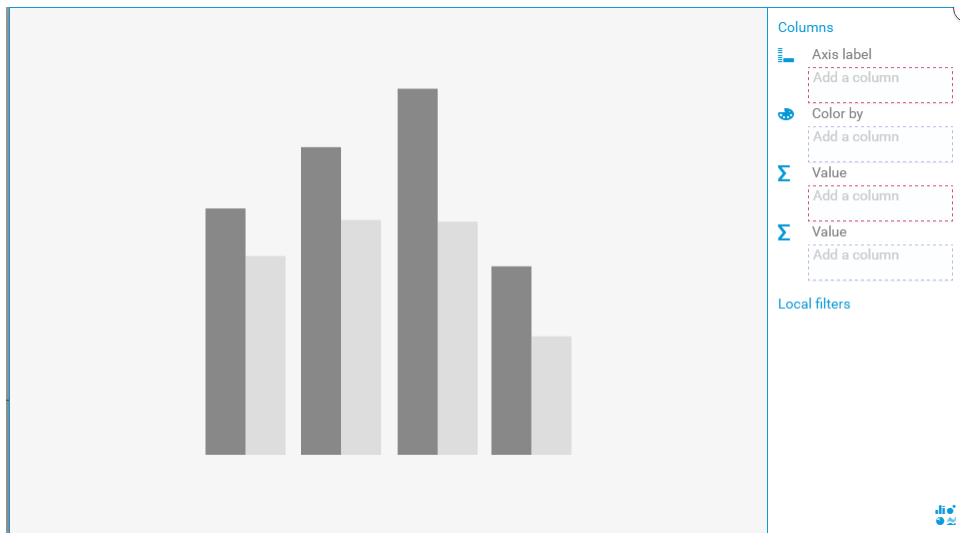5: A blank worksheet will appear:
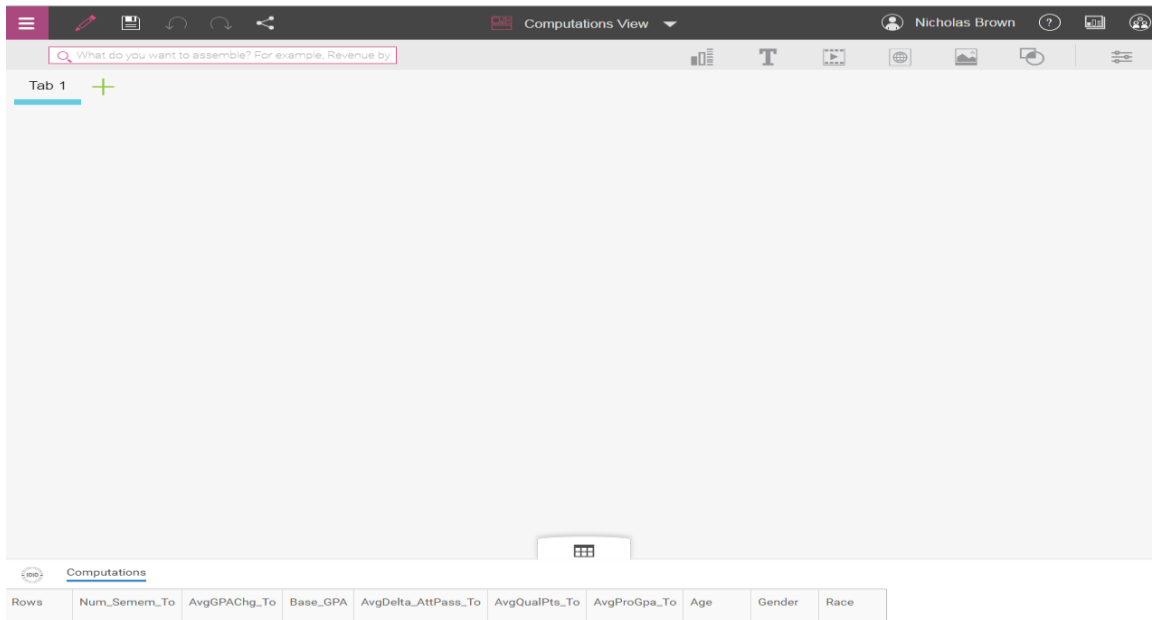
6: Click the chart button within the menu ribbon:

7: From the list of visualizations, select the vertical bar graph button :

8. A generic chart will appear with unpopulated columns listed to the right:

9: Populate the Axis label by clicking and dragging "Gender" into the Add a column box; then drag "Num_Semem_To" into the 'Color by' box and also into the 'Value' box . As you populate your data, the final chart will look like this: