Peer-Graded Assignment: Part B - Building a dashboard with Google Looker studio

Estimated time needed: 60 minutes

In this assignment, you will create some visualizations and add them to dashboards using Google looker Studio.

Software Used in this Assignment

In this assignment you will use the Google's **Looker Studio**.

Prerequisites

You need access to Google Looker studio. This Google Looker studio lab will guide to get your access to Google Looker studio, and also get you started with how to use it to analyze the data.

Dataset Used in this Assignment

The dataset you are going to use in this assignment comes from the following source: https://stackoverflow.blog/2019/04/09/the-2019-stack-overflow-developer-survey-results-are-in/ under a **ODbL: Open Database License**.

We are using a modified subset of that dataset for the assignment, so to follow the assigment instructions successfully, please use the dataset provided with the assignment, rather than the dataset from the original source.

Guidelines for the Submission

1. Download the 2 files m5_survey_data_demographics.csv and m5_survey_data_technologies_normalised.csv. Upload these 2 CSV files as data assets to your Googel Looker Studio.

2. Create 3 dashboards **(3 separate Pages under a single dashboard)** as follows:
   - One page using the 2 x 2 rectangle areas tabbed template - rename this dashboard tab to **Current Technology Usage**.
   - One page using the 2 x 2 rectangle areas tabbed template - rename this dashboard tab to **Future Technology Trend**.
   - One page using the 2 x 2 rectangle areas tabbed template - rename this dashboard tab to **Demographics**.

   Note: You can refer to this instructional guide for steps on how to capture screenshots of the charts displayed on the dashboard in Google Looker Studio.

3. On the **Current Technology Usage** page, use the data asset **m5_survey_data_technologies_normalised.csv** and capture the following metrics as visualizations:
   - In the first graph **(Panel 1)**:
     - Capture **Top 10 LanguageWorkedWith**.
     - Visualize as a **Stacked Bar chart**.
     - Utilize **Dimension**, **Breakdown Dimension**, **Metric** and **Colour by** fields of Stacked Bar chart.
     - Include **Show data labels** feature.
     - Include a proper **Chart title**.
   - In the second graph **(Panel 2)**:
     - Capture **Top 10 DatabaseWorkedWith**.
     - Visualize as a **Stacked Column chart**.
     - Utilize **Dimension**, **Breakdown Dimension**, **Metric** and **Colour by** fields of Stacked Column chart.
     - Include **Show data labels** feature.
     - Include a proper **Chart title**.
   - In the third graph **(Panel 3)**:
     - Capture **PlatformWorkedWith**.
     - Visualize as a **Word cloud chart**.
     - Utilize **Dimension** and **Metric** fields of Word cloud chart.
     - Include a proper **Chart title**.

     Hint: To create a Word cloud graph use **Vega/Vega-Lite** form the Community Visualization. For more details click here
   - In the fourth graph **(Panel 4)**:
     - Capture **Top 10 WebFrameWorkedWith**.
     - Visualize as a **Scatter bubble chart**.
     - Utilize **Metric X**, **Metric Y**, **Bubbles Size** and **Bubble Colour** fields of Scatter bubble chart.
     - Include a proper **Chart title**.

   These graphs may include null values. To filter out these null values, use the **Add Quick Filter** option. Make sure to apply separate filters for each graph based on the columns used in the graph.

4. On the **Future Technology Trend** page, use the data asset **m5_survey_data_technologies_normalised.csv** and capture the following metrics as visualizations:
   - In the first graph **(Panel 1)**:
     - Capture **Top 10 LanguageDesireNextYear**.
     - Visualize as aStacked **Bar chart**.
     - Utilize **Dimension**, **Breakdown Dimension**, **Metric** and **Colour by** fields of Stacked Bar chart.
     - Include **Show data labels** feature.
     - Include a proper **Chart title**.
   - In the second graph **(Panel 2)**:
     - Capture **Top 10 DatabaseDesireNextYear**.
     - Visualize as a **Stacked Column chart**.
     - Utilize **Dimension**, **Breakdown Dimension**, **Metric** and **Colour by** fields of Stacked Column chart.
     - Include **Show data labels** feature.
     - Include a proper **Chart title**.
   - In the third graph **(Panel 3)**:
     - capture **PlatformDesireNextYear**.
     - Visualize as a **Tree map chart**.
     - Utilize Utilize **Dimension** and **Metric** fields of Tree map chart.
     - Include **Show Scale** feature.
     - Include a proper **Chart title**.
   - In the fourth graph **(Panel 4)**:
     - Capture **Top 10 WebFrameDesireNextYear**.
     - VVisualize as a **Scatter bubble chart**.
     - Utilize **Metric X**, **Metric Y**, **Bubbles Size** and **Bubble Colour** fields of Scatter bubble chart.
     - Include a proper **Chart title**.

   These graphs may include null values. To filter out these null values, use the **Add Quick Filter** option. Make sure to apply separate filters for each graph based on the columns used in the graph.

5. On the **Demographics** dashboard page, use the data asset **m5_survey_data_demographics.csv** and capture the following metrics as visualizations:
   - In the first graph **(Panel 1)**:
     - Capture **Respondent classified by Gender**.
     - Visualize as a **Pie chart**.
     - Utilize **Dimension** and **Metric** fields of Pie chart.
     - Include **Slice Label** and **Colour by** feature.
     - Include a proper **Chart title**.
   - In the second graph **(Panel 2)**:
     - Capture **Respondent Count for Countries**.
     - Visualize as a **Filled Map chart**.
     - Utilize **Location**, **Colour metric** fields of Filled Map chart.
     - Include a proper **Chart title**.
   - In the third graph **(Panel 3)**:
     - Capture **Respondent Count by Age**.
     - Visualize as a **Line chart**.
     - Utilize **Dimension** and **Metric** fields of Line chart.
     - Include **Show data labels** feature.
     - Include a proper **Chart title**.
   - In the fourth graph **(Panel 4)**:
     - Capture **Respondent Count by Gender, classified by Formal Education Level**.
     - Visualize as a **Stacked bar chart**.
     - Utilize **Dimension**, **Breakdown Dimension**, **Metric** and **Colour by** fields of Stacked bar chart.
     - Include **Show data labels** feature.
     - Include a proper **Chart title**.

   Use **Filters for this page** feature to filter out entries of other types except **Man** and **Woman** from the data point **Gender**.

6. To generate the GitHub link for the dashboard, please follow the instructions provided below:
   - First, convert the Word document you created with the screenshots into a PDF and save it to your computer.
   - Later upload the PDF file to GitHub by following the instructions in the reading Getting Started with GitHub .
   - Further in the MySubmission tab of the assignment paste the GitHub link of the Dashboard in the URL textbox.

Grading Information

For your assignment to be graded in a subsequent step in this module, you will be required to submit the GitHub link to the PDF of the dashboard you created.

The **main grading criteria** will be:

- Have you provided GitHub link which opens your valid Looker dashboard PDF?
- Have the correct tabs been created?
- Have you created the required number of visualizations for each page of the dashboard?
- Have you captured the correct metrics, chart types, chart features and titles for each visualization?
- Are the results correct?

You **will not be judged** on:

- Your English language, including spelling or grammatical mistakes.

Author(s)

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Other Contributor(s)

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Changelog

Date	Version	Changed by	Change Description
2024-05-23	1.1	Pooja Patel	Created initial version