# IT 3703 Data Analytics – Google Data Studio Lab 2: Data Preparation

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This lab is to help students practice data preparation with Google Data Studio, including data source connection, and data transformation (calculated fields).

**Tasks**

1. Connect to a data source (CSV, Google Spreadsheets, Bigquery)

The following official support information is very helpful. Please complete them.

* Upload CSV files to Data Studio <https://support.google.com/looker-studio/answer/7333350>
* Model the data <https://support.google.com/datastudio/answer/6402048>
* About data sources <https://support.google.com/datastudio/answer/6268208>
* Tutorial: Create a Google Sheets data source <https://support.google.com/datastudio/answer/6295223>
* Tutorial: Create a BigQuery data source <https://support.google.com/datastudio/answer/6295968> (Note there is a notice about billing; BigQuery does provide free usage tier, see <https://cloud.google.com/bigquery/pricing#free-tier>) – disclaimer, BigQuery is not required for the course, and please stop using BigQuery if you see any possibility of being charged. For more details working with BigQuery+GDS, see <https://cloud.google.com/bigquery/docs/bi-engine-looker-studio>

Learn something more about data types in Google Data Studio

* Data source fields <https://www.optimizesmart.com/guide-to-data-source-fields-in-google-data-studio/>
* Data types <https://www.optimizesmart.com/guide-to-data-types-in-google-data-studio/>
* Number formats <https://www.optimizesmart.com/google-data-studio-number-formats-data-types/>
* Geo data <https://www.optimizesmart.com/geo-data-country-region-latitude-longitude-in-google-data-studio/>

More references and sources

* <https://support.google.com/looker-studio/topic/6370331>
* <https://www.optimizesmart.com/how-to-format-google-sheets-data-for-google-data-studio/>

2. Google Analytics Academy online course - continue from lab 1

<https://analytics.google.com/analytics/academy/course/10>

Please complete the following unit and the assessment at the end of each unit.

* Unit 3: Build Your First Report

Take screenshots or other proof that you have completed the units and passed the assessments. **Include this part in the lab report.**

3. Use calculated fields – this accompanies module 6 data preparation.

Use the following official Google support to understand calculated fields <https://support.google.com/datastudio/topic/7570421> - and particularly the following sections:

* About calculated fields <https://support.google.com/datastudio/answer/6299685>
* Here is a video tutorial <https://www.optimizesmart.com/guide-to-calculated-fields-in-google-data-studio/>
* Tutorial: Create calculated fields <https://support.google.com/datastudio/answer/7569890> - take a screenshot of the calculation settings and the data view after the final step. **Include this part in the lab report.**

More references and sources

* <https://www.seerinteractive.com/blog/10-calculated-fields-data-studio/>
* <https://measureschool.com/calculated-fields-data-studio/>

4. Reflection - **Include this part in the lab report.**

What do you think about Google Looker Studio at this point? Please address the following topics:

1. What areas do you find it easy or difficult to use? What are the strengths and weakness of GDS based on your experience and readings?
2. Who might be the target user groups of it?
3. Do some research and see how the industry values this tool.

**Submission**

Submit the following two items to D2L (do not ZIP them together):

1. A lab report in PDF format. This report should include required parts with screenshots, labels, and explanations. All screens must be clear, original, and show the complete screen.
2. Download the GDS reports you created and submit them as well.

**Grading**

The lab is assessed based on:

* Completion of required tasks.
* Satisfaction of submission requirements.
* The quality of lab report, including completeness and explanation of screenshots and the work you have done.

**Rubric:**

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| **Score** | **Summary** | **Rating Description** |
| 10 | Outstanding work; beyond expectation. | Correctly completed all tasks.  Satisfied all submission requirements.  Excellent report with clear original screenshots and explanation. |
| 8-9 | Good work; meet expectations. | Correctly completed all tasks.  Satisfied most submission requirements.  Good report with clear original screenshots; explanation may need improvement. |
| 6-7 | Adequate work; need improvement. | Mostly completed all tasks.  Satisfied most submission requirements.  Too simple report without labels or explanations. Missing key required screenshots, or unclear/unqualified screenshots. |
| <6 | Lack of effort. | Missing some parts and tasks.  Did not follow submission requirements.  Poor report with unclear, partial or edited screenshots. No explanations at all. |