

**CMPSC 301
Data Analytics
Fall 2018**

**Lab 2: Google Analytics Report Tutorial
and Response to Marketing Analytics
7th Sept 2018**

Google Analytics is the most popular enterprise web analytics platform that provides rich insights into website traffic and marketing effectiveness. In the first part of the lab you are invited to investigate the available tools on Google analytics and summarize your understanding of these tools. In the second part of the lab you are asked to explore the issues which follow the theme of the speaker about marketing research.

Objectives

To learn how to setup and use metric reports in Google Analytics. To become proficient with the tool kit and learn to create reports. The latter part of this lab is to determine how the misuse of data may impact unsuspecting individuals.

Reading Assignment

Please review class slides and your class notes. You can also find useful information in the Google Analytics Community by performing online research. Please take some time to gain experience with using Markdown to write your work. See *Mastering Markdown* <https://guides.github.com/features/mastering-markdown/> for more details about Markdown.

GitHub Starter Link

<https://classroom.github.com/a/CK96uYs7>

To use this link, please follow the steps below.

- Click on the link and accept the assignment.
- Once the importing task has completed, click on the created assignment link which will take you to your newly created GitHub repository for this lab.
- Clone this repository (bearing your name) and work on the lab locally.
- As you are working on your lab, you are to commit and push regularly. You can use the following commands to add a single file, you must be in the directory where the file is located (or add the path to the file in the command):

```
- git commit <nameOfFile> -m ‘‘Your notes about commit here’’  
- git push
```

Alternatively, you can use the following commands to add multiple files from your repository:

```
- git add -A
- git commit -m 'Your notes about commit here'
- git push
```

Part 1: Google Analytics

The reports offered by the Google Analytics framework provide convenient metrics to be used to understand the traffic and its trends over the course of a user-defined time-frame. Histograms, charts, tables and similar graphical methods of displaying information are provided as convenient modules which may be inserted into any report.

Google Analytics provides default reports where these displays have been added, but users are encouraged to create their own reports where particular graphical displays of metrics have been added. For instance, one may decide that the default reports are inadequate for one's information interests and so unique reports can be designed using the customize menu option shown in Figure 1. In this lab, you will use the report editing tool of Google Analytics in Figure 2 to create your own reports to allow a focus on specific questions about site use.

In order to complete this lab, your website has to be correctly linked and configured with the Google Analytics online toolkit. Either you or others are encouraged to click around the website so that some website traffic is generated to show data in your final customized report.

A Tutorial to Create a Customized Report

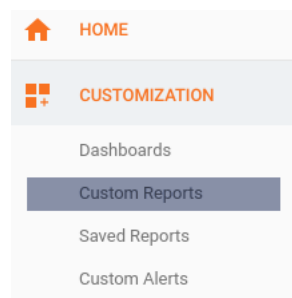


Figure 1: Your tutorial is to inform users how to create a Custom Report from the *Customize* menu item.

In this lab, you will study the default reports given by Google Analytics with the intention of creating your own tutorial to instruct beginners to create a *Customized report*. In particular, the final customized report will be used to respond to specific inquiries about web site activities which are given below. See Figure 1 for its menu option.

Your tutorial will primarily center on the types of *Dimensions* and *Metrics* that you chose (as shown in Figure 2) which allow you to respond to usage questions. You are to provide clear justification about which *Dimensions* and *Metrics* you choose to respond to a question. Spend some time on discussing how you have decided to arrange your charts to give the maximum usage from your customized report. Please provide screenshots to illustrate your discussion and completed report.

Traffic Questions to Address

1. How many visits were there last month?
2. How many unique visits where there last month?
3. Where were these users from (country and city)?
4. What kinds of web pages did they visit; what was the number of visitors who *bounced*?
5. Number of page views?
6. Average visit duration?
7. Percentage of new visits?
8. Percentage of search traffic?
9. How did this traffic come to the website?

0.1 Writing Your Tutorial

You are to use the Markdown file, `writing/CustomizedReports.md` to write your tutorial document so that you can include your graphics directly inside the document. **Be sure to add your name! Please do not upload a collection of screenshots as individual files; your screenshots are to be placed inside your `writing/images/` directory and the incorporated into your your Markdown document as shown in the example Markdown code. Please be sure to mention your figures by name and explain them in your work.**

Questions

After you have created and discussed your customized report, locate the Markdown file, `writing/ReflectionQuestions.md`. You will edit using Markdown language this file to respond to the questions below. **Please be sure to add your name!**

1. For a web site such as `www.amazon.com`, which one metric is the most important to determine the business performed daily by the site? Why?
2. For a web site such as `www.facebook.com`, which one metric is the most important for determining the general ease of use of the site. Why?
3. What metric would you suggest is often included in a report but is, actually, not very informative or provides no real value to an analysis? Why?

Edit Custom Report

General Information

Title

Report Content

Report Tab

Name

Type

Dimensions

Metrics

Filters - optional

Figure 2: Your report is justify which *Dimensions* and *Metrics* to apply to respond to the questions above.

Part 2: Reflection on the Speaker's Presentation

Based on the talk given by Ron Mattocks on Friday, 14th September, discuss the following:

1. How data analytics is used in various marketing applications. Explain how tools such as Google Analytics could aid in marketing research. Please give concrete examples to support your arguments.
2. Reflect on the any negative impacts of using data analytics in marketing applications. Provide at least one citation to a primary source to validate your argument.

Important Details

Lab directory structure: You are to create a labs directory (`mkdir labs` in which you are to add the GitHub Classtoom repositories for each of your weekly labs (use this command `mkdir labs/labsxx`, where *xx* is the two digit lab number). For example, your first and second lab repository should be located in the paths, `labs/lab01` and `labs/lab02`, respectively.

Add you name to your work: Please remember to include your name on everything you submit for the class.

Required Deliverables

This portion of the assignment invites you to submit an electronic version of the following deliverable through your GitHub Classroom lab repository. Note: this repository is the one which you clone from the above link.

1. Your tutorial document file: `writing/CustomizedReports.md` instructing how to create customized reports responding to the specific questions above.
2. Your reflections and responses document file: `writing/ReflectionQuestions.md` responding to the three questions concerning the metrics of other websites, and your discussion concerning the talk given by our speaker.

When you have finished, please ensure that the GitHub web site has your pushed work by visiting your repository at the site. Please see the instructor if you have any questions about assignment submission.