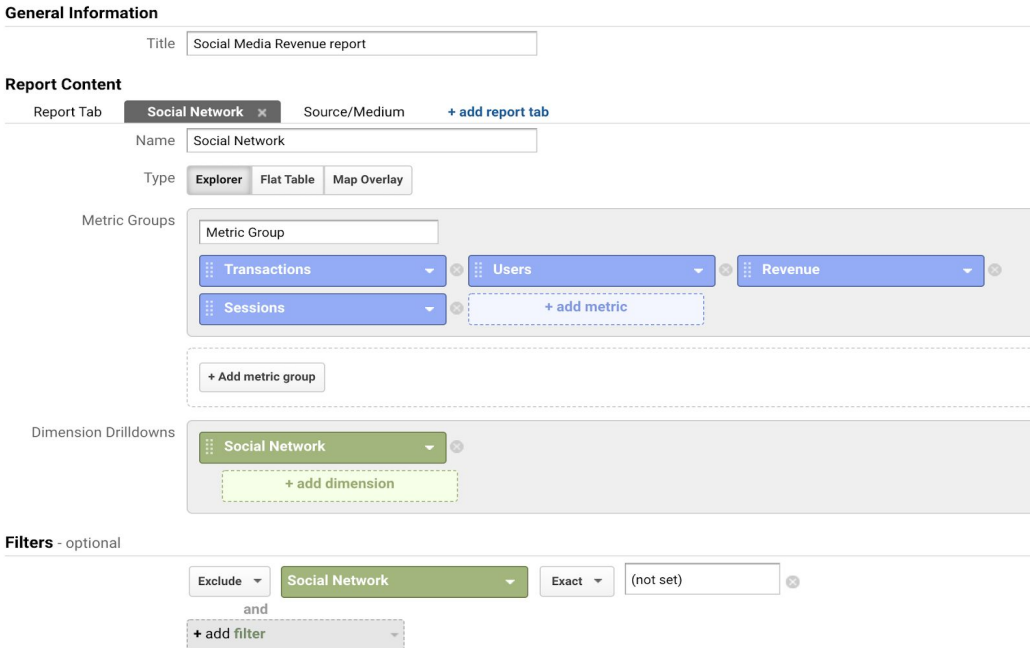
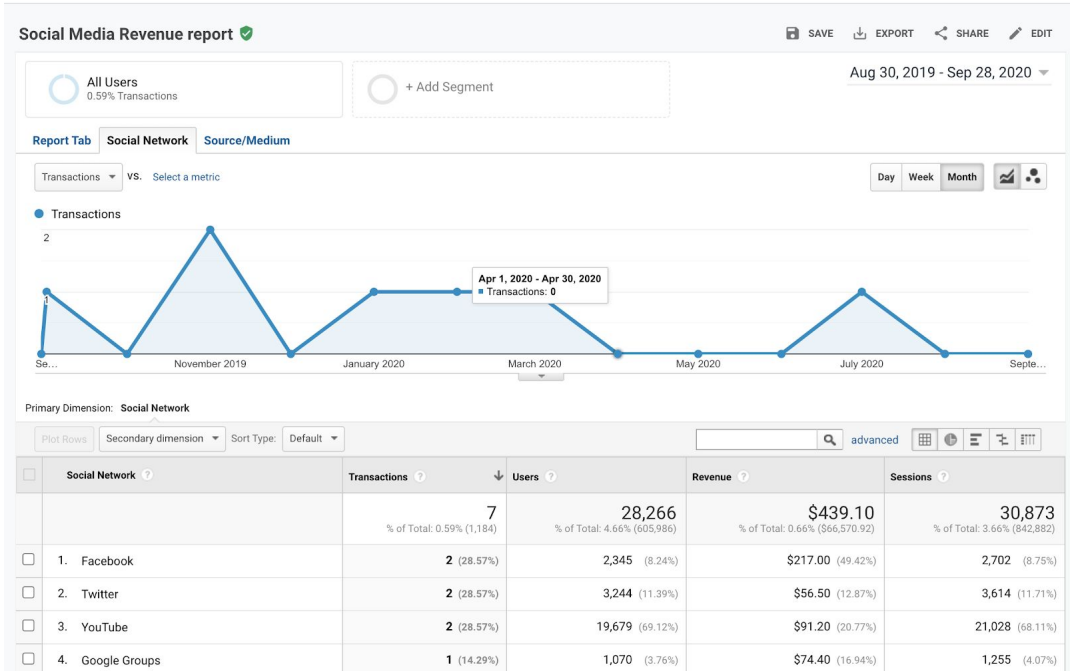
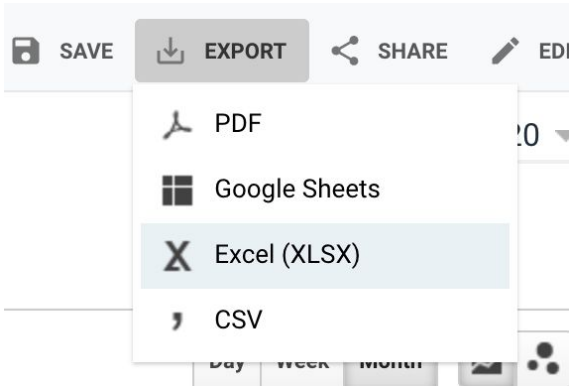
Google Analytics Custom Report

Step 1: Create a custom report as follows. Name it anything (eg: Social Media Revenue Report)



Step 2: Filter date range as shown. Then select the **Export** button and select Excel to export the data as an excel file.





R Programming exercise:

Which Social Media Channel results in the highest sessions and revenue?

1) Read the dataset generated above. Here we specify the sheet to read from (eg: Dataset1)

```
library(dplyr, warn.conflicts = FALSE)
library(readxl)
library(tidyr)

df <- read_excel('SocialMediaRevenue.xlsx', 'Dataset1')
df <- df %>%
  rename(social_media = 'Social Network`) %>%
  rename_all(tolower) %>%
  drop_na()
```

2) Perform data translations:
   - add these columns. (hint: use mutate) Observe values are percentages!

     session_share = sessions / sum(sessions),
     sales_share = transactions / sum(transactions),
     revenue_share = revenue / sum(revenue)

   - Rename transactions to **sales**
   - Then sort by **session_share** in descending order.

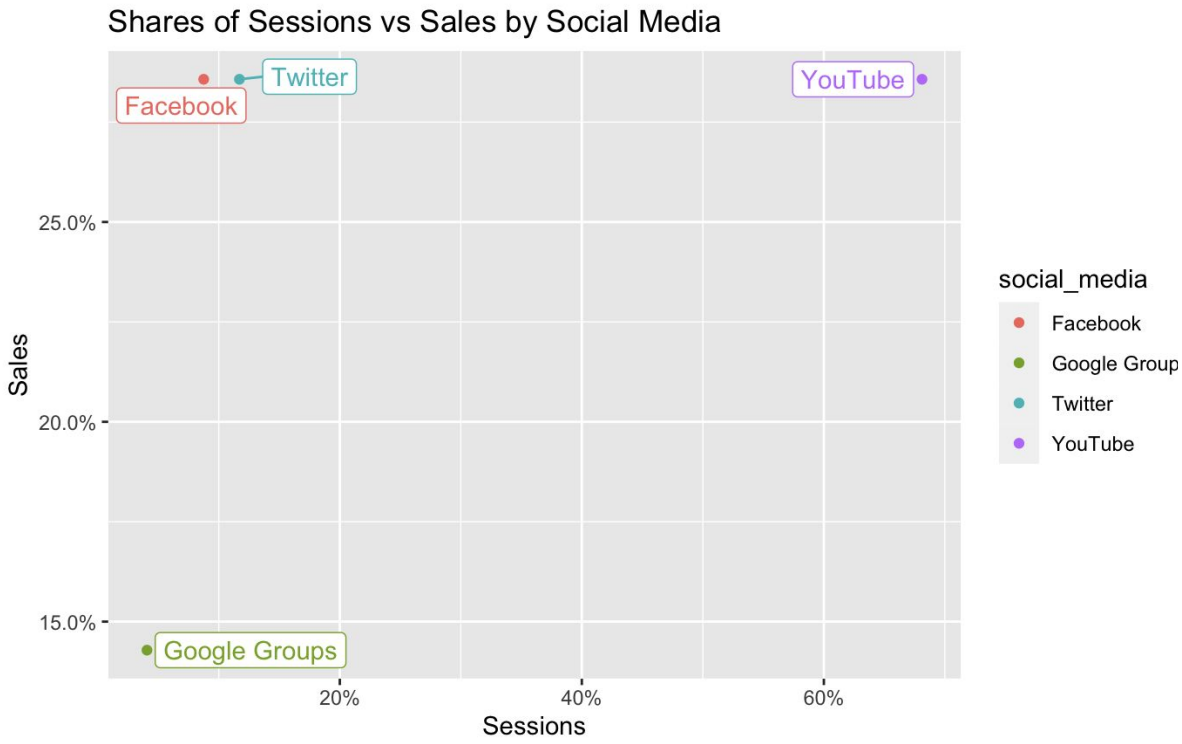
3) Show the structure, contents and summary of the transformed data frame.

4) **Plot *session_share* vs *sales_share* by *social_media***.

   This plot shows the relationship between sessions vs sales (as a percentage of total) for each social media, even those which did not produce any sales. That is, do not perform any filtering.

   Describe insights gained from the visualization.

5) Create the same plot above, but this time, filter the data set to only show observations with **sales > 0**. Following is an example



Describe insights from the visualization. How does this report compare to the GA report?

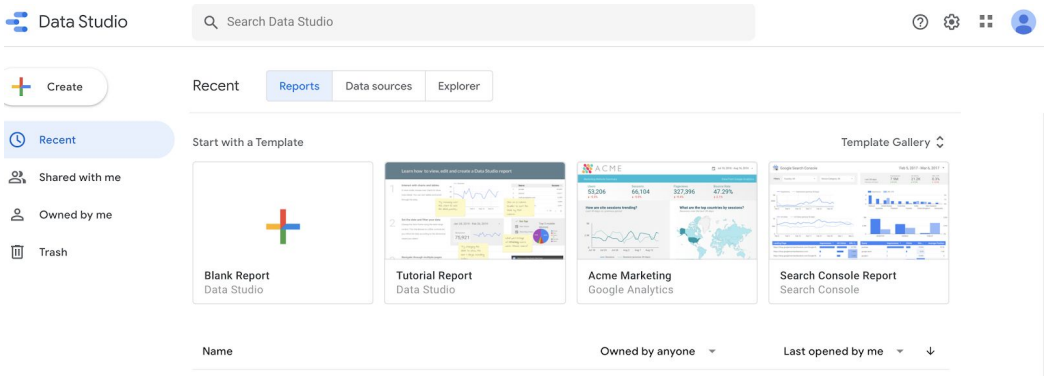
6) Create another visualization of your choice for key metrics such as **conversion rate**. Consider session versus user for determining conversion rate.

Background: In GA, Users are the number of unique visitors to a site. Someone visiting a site 10 times on the same device or browser is still counted as one user. GA counts these repeat customers as Returning Users. However, If a user visits a site, deletes their browser cookies, and returns afterwards, they are now counted as a New User.

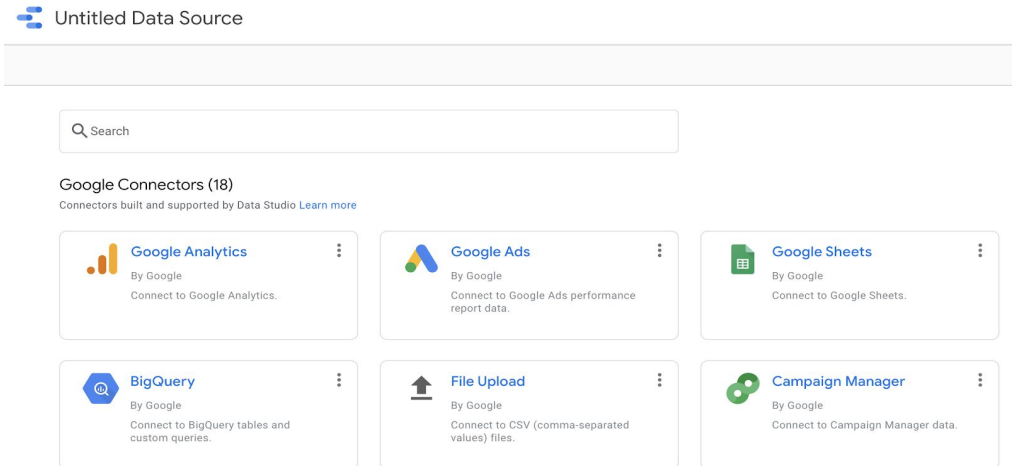
Sessions in GA are the total number of visits to a site, both new and repeat visits. Sessions should be the same or higher than users.

Google Data Studio Reports

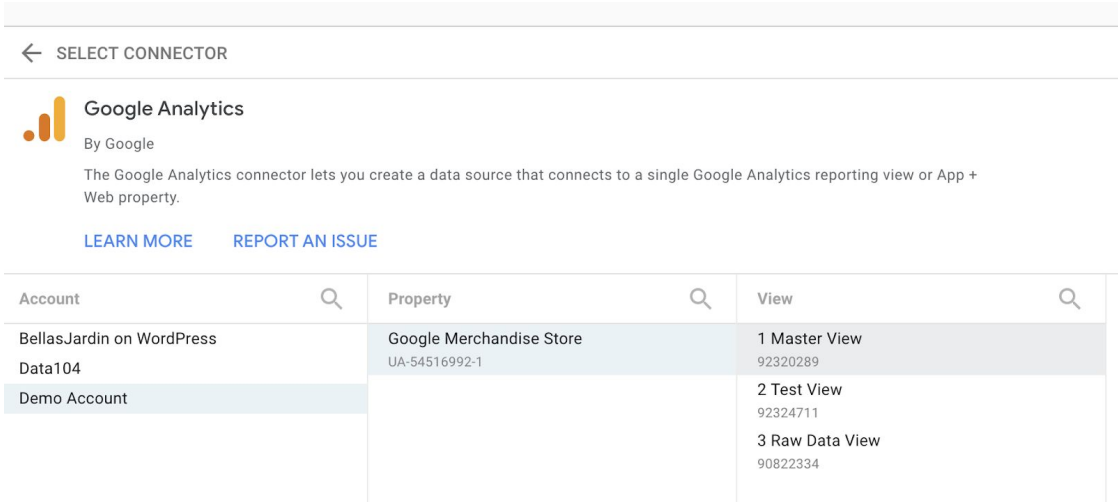
Step 1: Navigate to Data Studio: https://datastudio.google.com

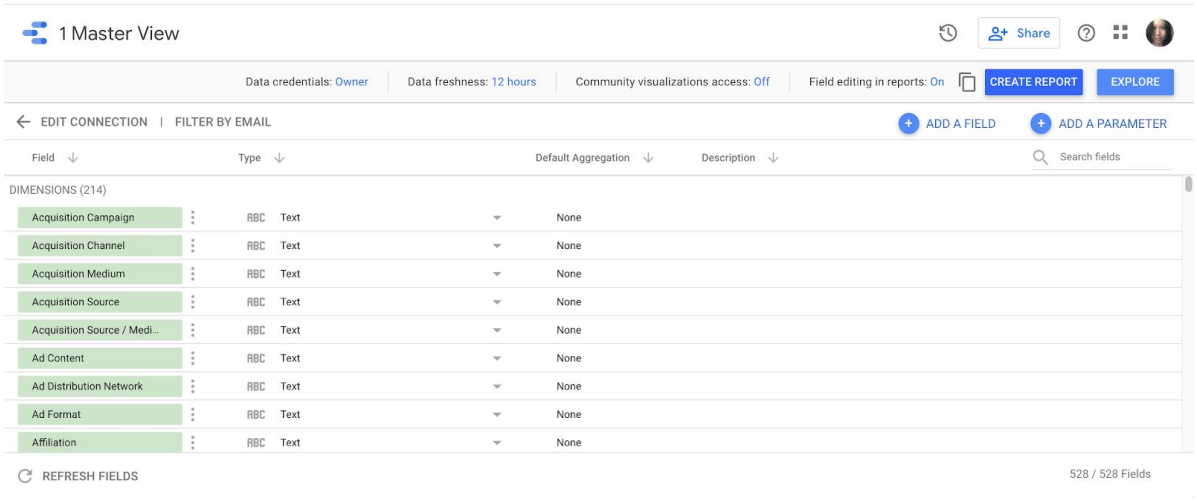


Step 2: Click **Create, Data Source** to create a datasource and select **Google Analytics**



Step 3: Select the Google **Demo Account**, Merchandise Store, Master View. Then **Connect**.





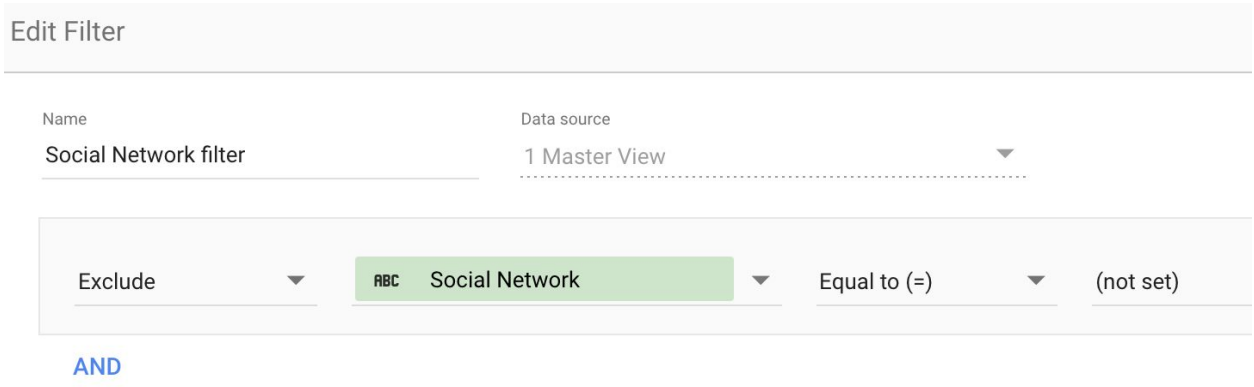
Step 4: Click **Create Report**. A default report is created with a chart table. Delete the chart table by clicking on it then hitting the Delete key.

Your objective is to create a report similar to the scatter plot in the R exercise. The report/visualization shows the Sales/Transactions vs. Sessions by Social Media,

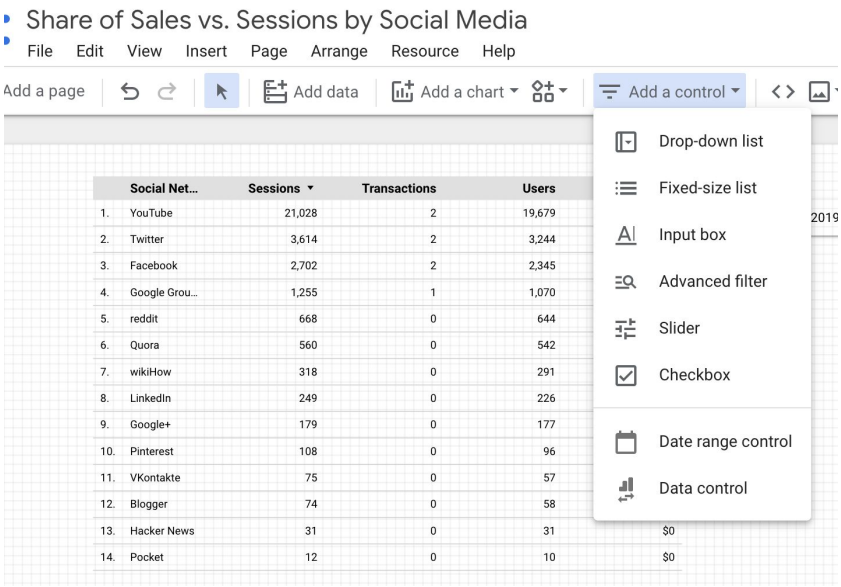
Rename your report to something meaningful (eg: Sales vs. Sessions by Social Media).

Add a new chart table. On the Data tab, add dimensions and metrics to be the same as the ones from the custom GA report in the very first step.

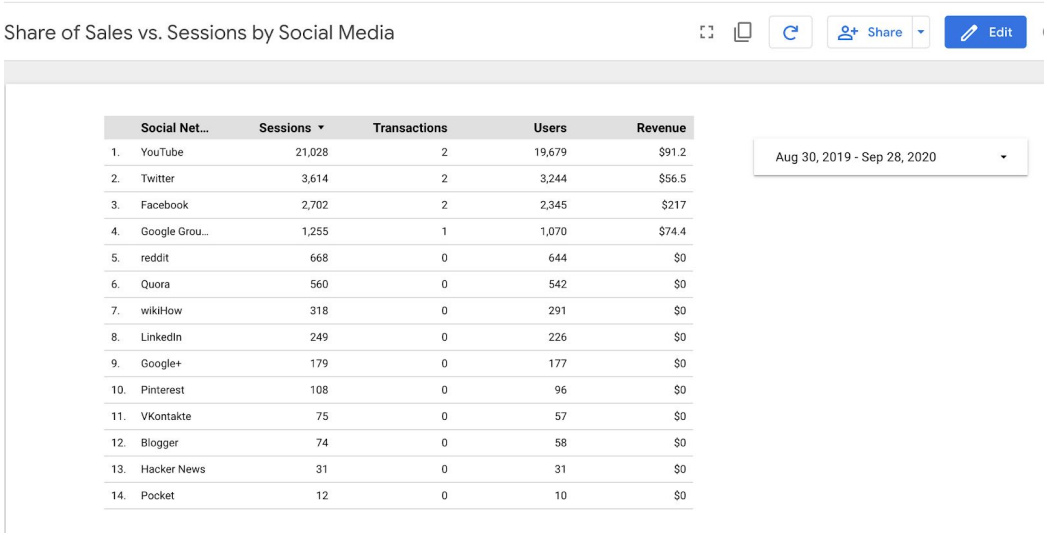
a) On the Data tab, add a filter to exclude the missing value: '(not set)' . If you don't see the filter option then in the browser, select find (CNTRL-F) and enter 'filter' in search. The page scrolls so that the filter option is visible.



b) Add a **date range control**, and specify the same date range as in GA custom report. By default, the date control is automatically applied to all controls on the page.



c) Your data studio looks like the following. You can click **View** to preview the report. Click **Edit** to edit.



e) **Your turn. Add a scatter plot that shows only the Social Networks that resulted in transactions.**

Refer to instructions from the following link as well as provided resources (as needed) to customize your report . Your final report will look similar to the following report

Note: The axis values are not displayed as a (percentage of total). This would typically require creating calculated fields, similar to the fields you created in the R project. However, attempting to do so results in the following error message because GA deals with aggregated values. Following discussion from Google Analytics.

Re-aggregating metrics is not supported. Aggregation functions can't be applied to already aggregated data. This includes most metrics found in Google Analytics, and Google Ads. For example, Sessions is already summed in your data set, so the formula SUM(*Sessions*) will produce an error.	This limitation comes from the underlying data set. Any solution will involve changing how the data appears there, if possible.

One alternative is to import the dataset file you generated earlier, into Data Studio and use that as the data source rather than connecting directly to Google Analytics.

Step 6: Add a new page and create any useful visualization from the Demo account data desired. Post a link to your 'view-only' report in the forum discussions. When you are done, you navigate to back to DS home: https://datastudio.google.com.

You will see your DS reports listed unde Reports, where you can edit or delete.