Data Visualization for Beginners with Google Data Studio

Who is Wiredcraft?

In a nutshell

We create & grow digital products for the world's best brands.

What we do

Helping MNCs tackle the tough digital challenges they face...

Omnichannel

Creating seamless experiences for your customers across all channels, online & offline, in Europe, the US & China.

China

Helping you navigate and invest in the digital ecosystem of what is probably your fastest growing market.

Digital transformation

Getting large enterprises to move at the speed of startups, create a product culture and succeed in an increasingly digital world.

Our team

60+ designers, engineers & data pros in SH, Paris & (soon) HK.

Read more

Want to learn more about the work we do? Check our blog for case studies.

Who are you guys?

A small pre-workshop survey

Rate yourself from 1 (low) to 5 (high) on the following statements:

- I understand what Data Studio is used for
- I know the difference between dimensions and metrics
- I can pick the right type of chart to fit the data
- I know how to set up filters and sort data
- I understand the purpose of a calculated field and how to create one

What to expect from today's session

- 10 minutes: An introduction to what Google Data Studio is and walkthrough of an example dashboard.
- 10 minutes: Setting up your own dashboard by following along on screen.
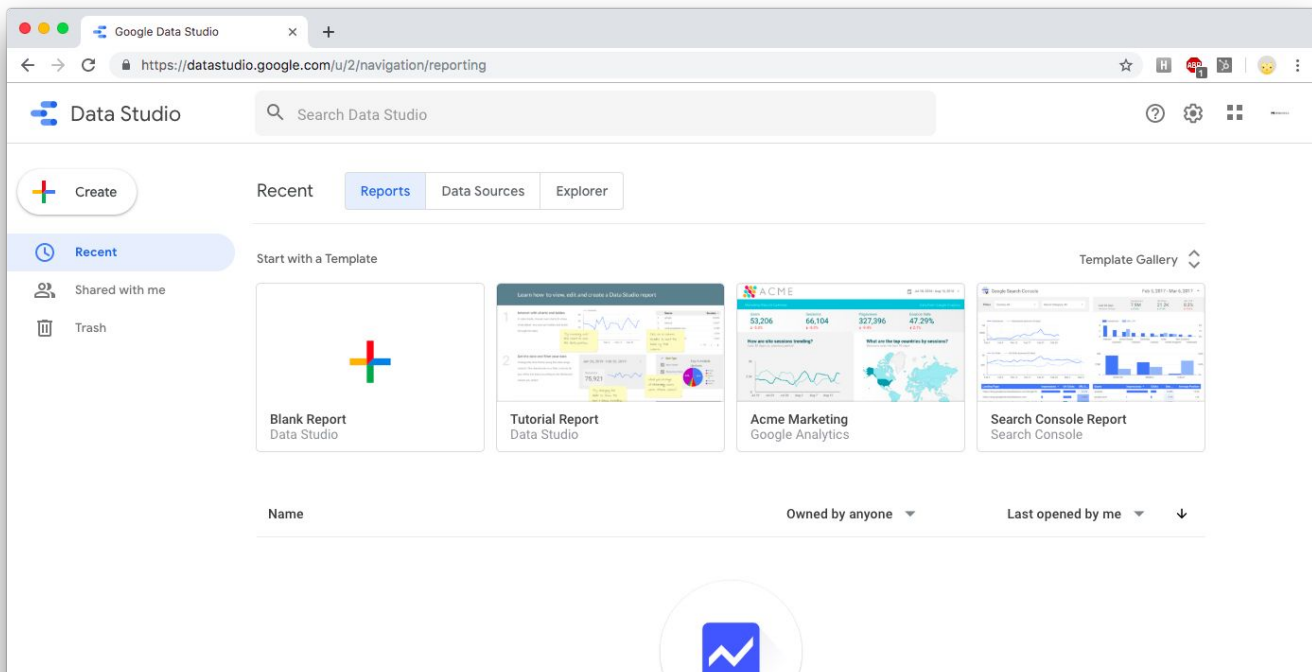- 45-60 minutes: Independent exercises with guidance

Wifi: wiredcraft-guest/WXfhGt6TgfR3eDhk

Download the slides to follow along: http://tiny.cc/wiredcraft

Introduction

What is Google Data Studio?

Introduction

A simple data visualization platform.

Easy to Use

Creates interactive reports that don't require knowledge of the GA admin to understand. Visuals can be as simple or complex as needed.

Constantly Updated

Rather than fetching the same numbers every week, a dashboard automatically updates its data according to your chosen date range.

Customizable

Unlike a full data set, which may contain sensitive information that you may not want shared, a dashboard just shows the metrics you choose.

Basic Terminology

- Dimension: an attribute of a user (e.g. page visited, browser, gender…)
- Metric: measures characteristics of a dimension (e.g. sessions, new users, bounce rate…)
- Filter: showing only a certain portion of the total data (e.g. date range, user segment…)
- Data Source: where we get the data from (e.g. Google Analytics, a spreadsheet, LinkedIn…)
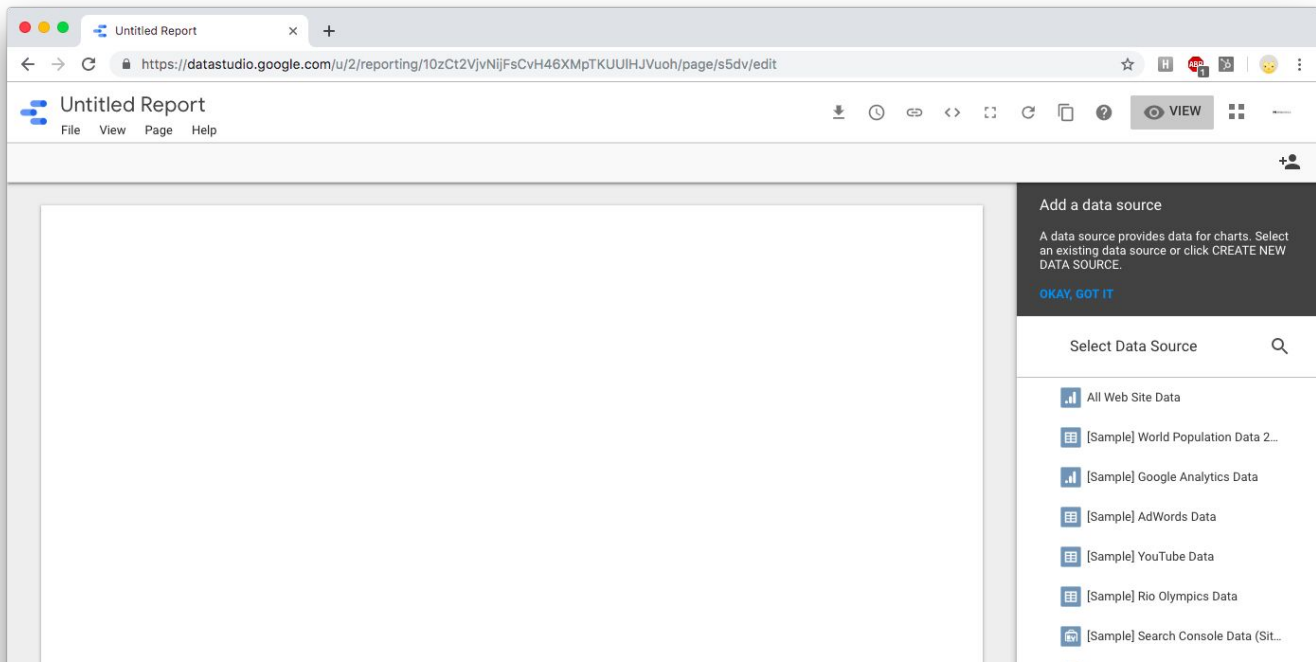
Walkthrough

Sample Data Studio dashboard

Warm up exercise

Creating your first dashboard

Creating your first dashboard

- First, go to http://tiny.cc/getGAdemo and click **Access Demo Account** to add the sample data that we will be using today
- Once it's added to your account, go to https://datastudio.google.com and click **Blank Report**
- At the bottom right, click **Create New Data Source**
- Select **Google Analytics**
- Select Demo Account > Google Merchandise Store > **1 Master View**

Exercise One

Your First Data Point
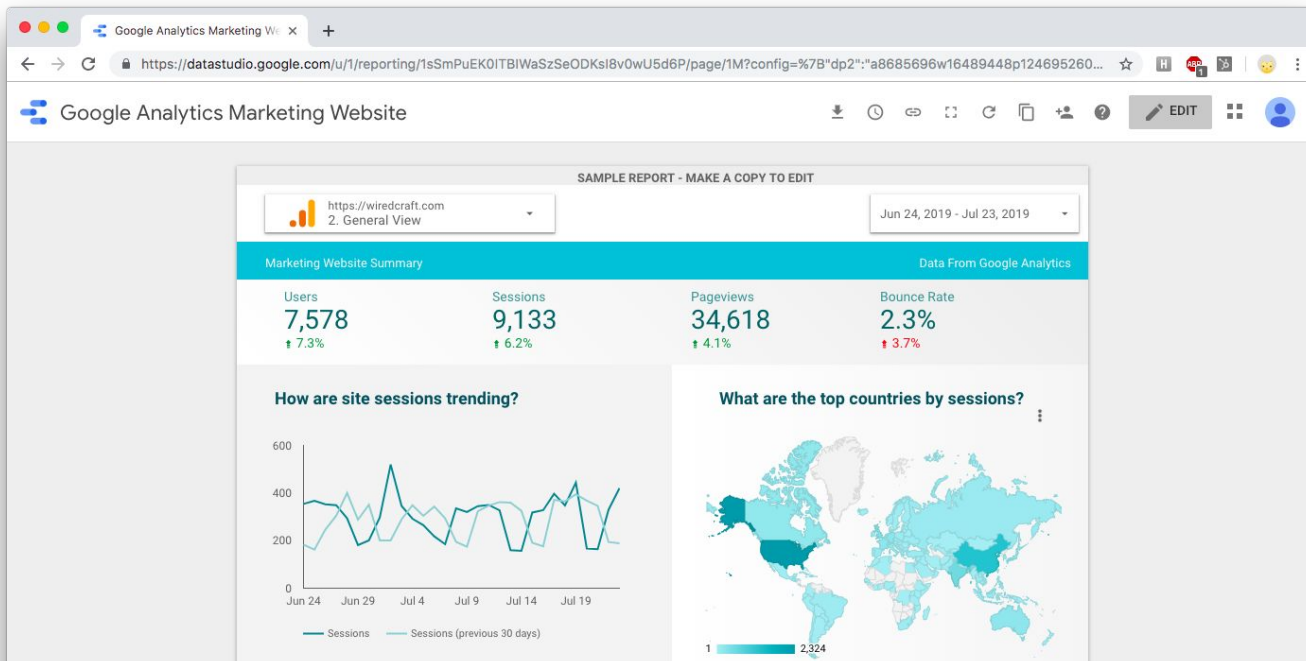
Exercise One: Your First Data Point

Purpose

To understand how to display a single data point in Data Studio, and how to configure data and style settings.

Skills

- Scorecard
- Date range comparison
- Chart style

Exercise One: Your First Data Point

Instructions

- Add a **Scorecard** chart to your dashboard
- Change the metric to **Bounce Rate**
- Change the date range of the data to the **Last 7 Days** and add a comparison for the **Previous Period** (i.e. the 7 days before that)
- Under the Style tab, change the Comparison Metric to show **green** for a decrease in bounce rate, and **red** for an increase in bounce rate.

Exercise Two

Data Exploration with Charts
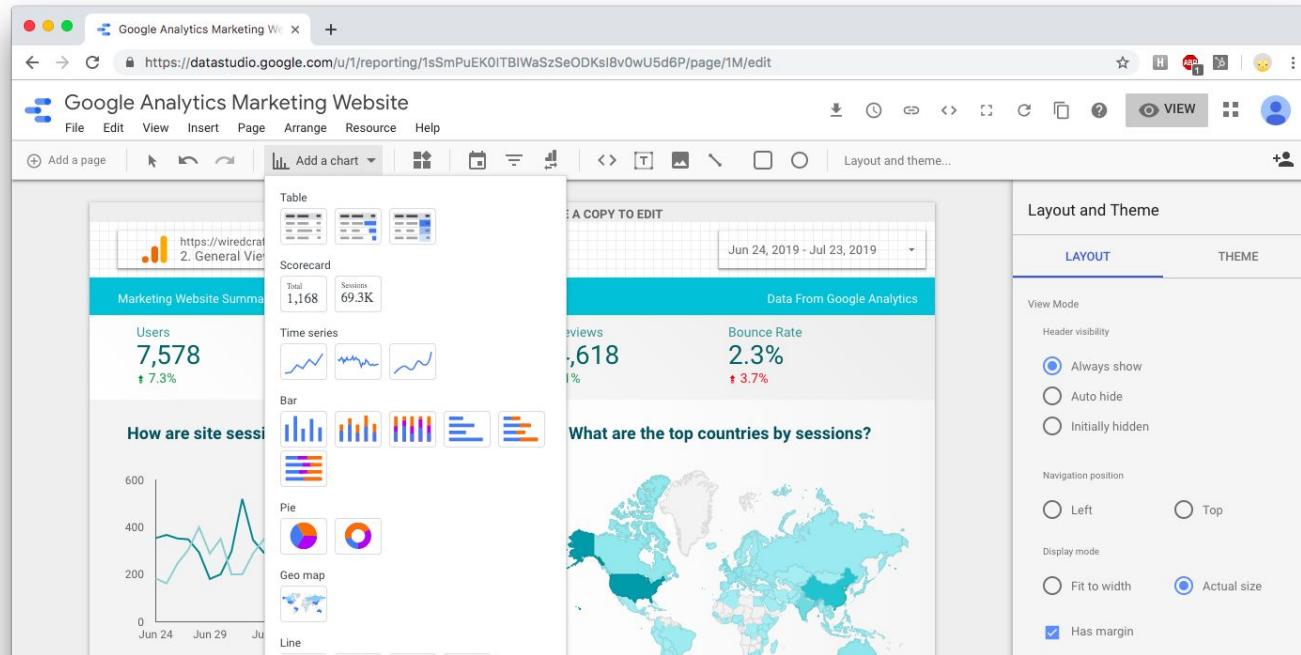
Exercise Two: Data Exploration with Charts

Purpose

To understand which types of charts are best suited to displaying different types of data.

Skills

- Pie chart
- Bar chart
- Line chart
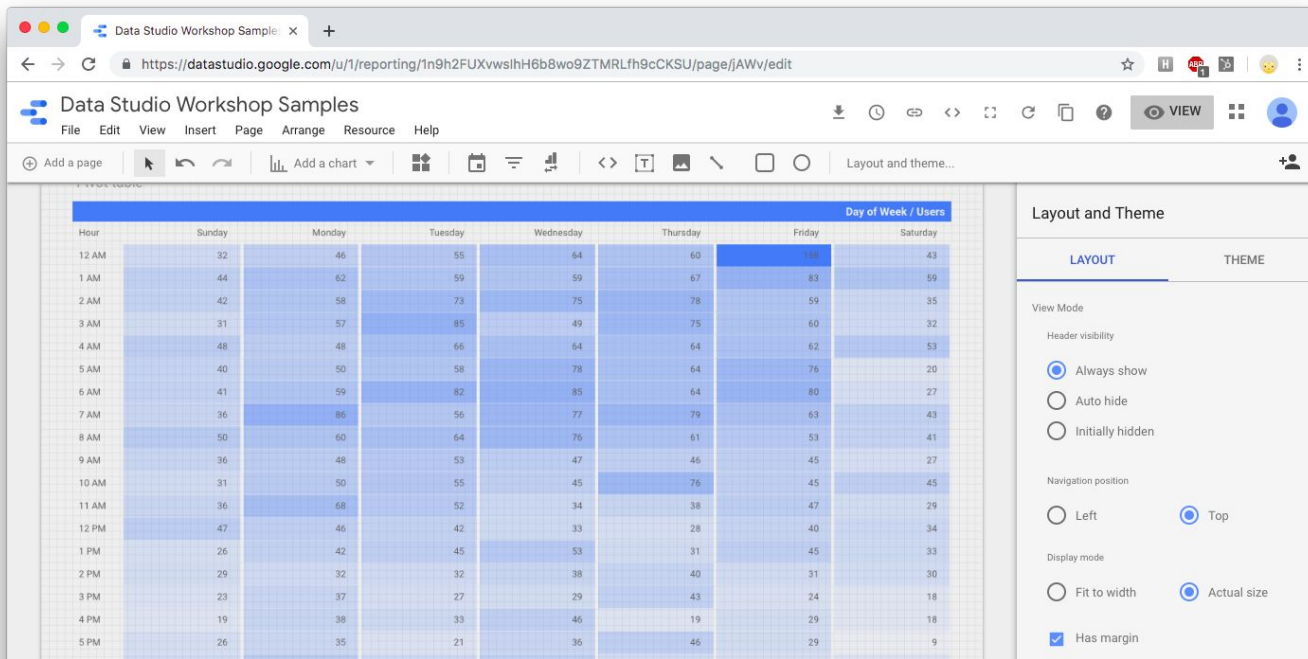
Exercise Two: Data Exploration with Charts

Instructions

- Create a chart to display the following data:
    - Gender
    - Age range of users
    - Sessions vs. Users over the last 7 days
- Each of the following chart types should only be used **once**:
    - Bar chart
    - Line chart
    - Pie chart

Exercise Three

Data Exploration with a Heat Map

Exercise Three: Data Exploration with a Heat Map

Purpose

To understand when a segment of users are most active on your website or app.

Skills

- Pivot table
- Filters
- Sorting

Exercise Three: Data Exploration with a Heat Map

# Instructions

- Create a **Pivot Table with Heatmap**
- Using **users** as your metric, find the row and column dimensions that would allow you to see **when and what day is the busiest time** for the website is (i.e. when it has the most users).
- Click **Add a Filter > Create a Filter**
- Give the filter a name, set conditions that **exclude users from the United States,** and save it to apply it to the table.
- Once you are satisfied, **sort your table** so that it's easy to read and the values appear in a logical order.

Exercise Four

Calculated Fields
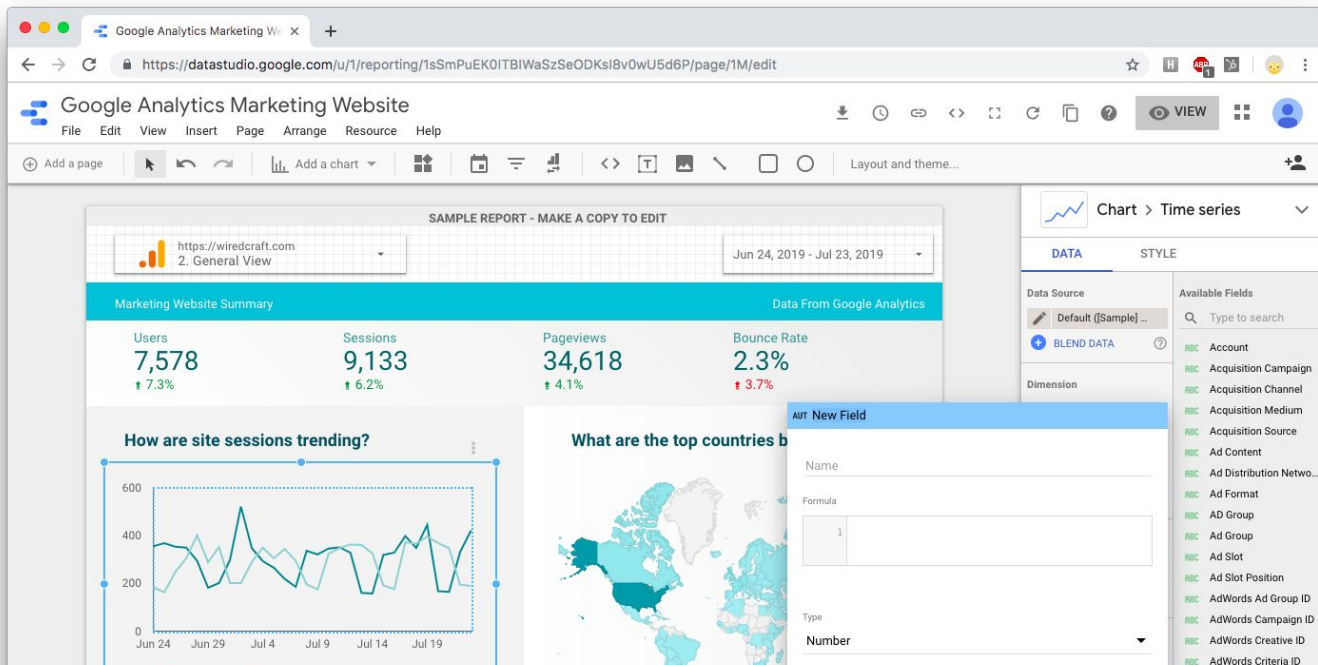
Before we start...

The many uses for calculated fields:

- **Arithmetic**: addition, subtraction, multiplication and division
- **Mathematical Formulas**: Examples include REGEXP_MATCH(), MIN(), MAX(), SUM()
- **Data Transformation**: Convert your data to text, numerical values, or even dates. Use functions like LOWER() to standardize text. Re-name fields according to company acronyms, or add unique identifiers.
- **Logical Comparisons**: Utilize IF/ELSE or CASE/WHEN statements within your data to apply categorical connections

Full list of functions

Exercise Four: Calculated Fields

Purpose

To understand how to create your own calculated fields for when a dimension doesn't quite fit your needs.

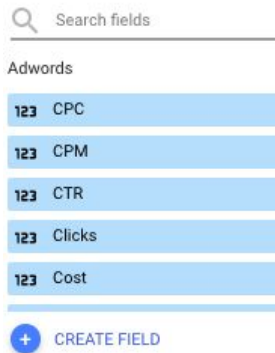# Skills

- Calculated fields

Exercise Four: Calculated Fields

Instructions

- Create a **Scorecard** that shows **what percentage of total users are new users**.
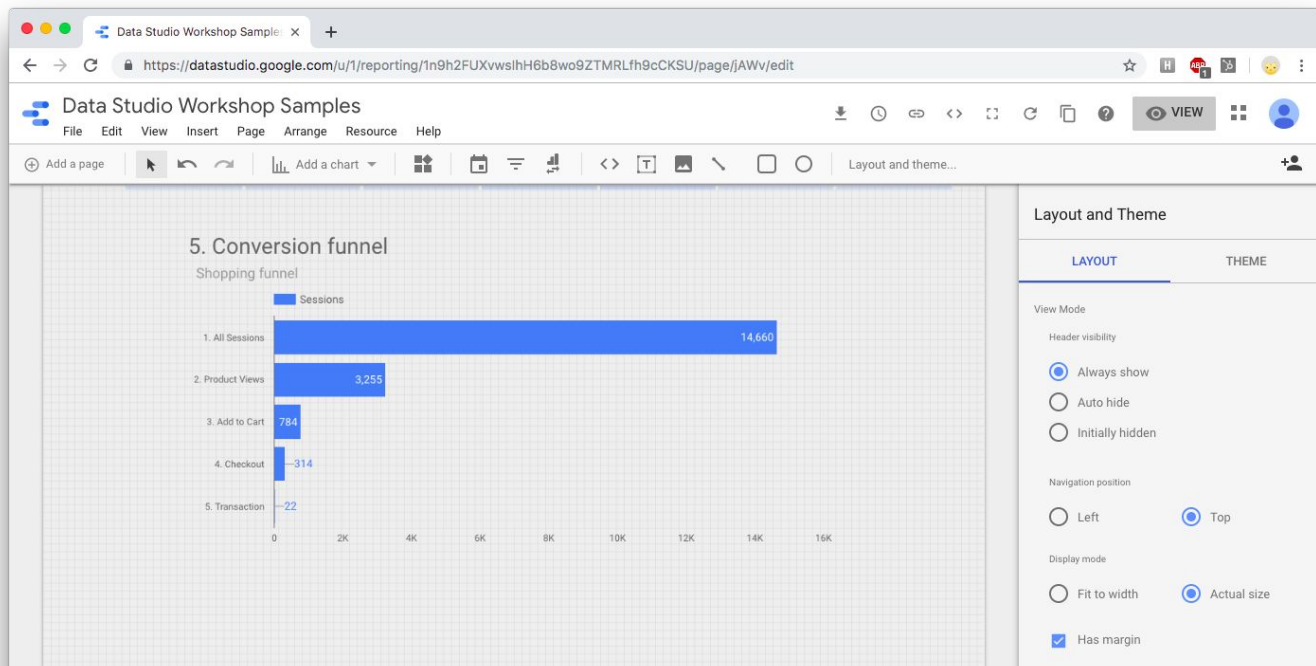
Hint

- To create a calculated field, click on **Create Field** at the bottom of the metric selector dropdown.

Exercise Five

Custom Conversion Funnels

`Exercise Five: Custom Conversion Funnels`

Purpose

To understand behaviour flows in a step-by-step process such as a shopping funnel or goal conversion.

Skills

- Calculated field
- CASE WHEN
- Filter

Exercise Five: Custom Conversion Funnels

Instructions

- Visualize the drop-off of users who go through the shopping funnel, using a **horizontal bar chart**. You should show the session flow from **All Sessions > Product Views > Add to Cart > Checkout > Transaction**.

Exercise Five: Custom Conversion Funnels

Hints

- There is a dimension called **Shopping Stage**, but it has too many steps and is hard to order. Create a table to see the available values.
- You'll need to pick out the relevant stages using a **CASE WHEN** calculated field to rename them in this format: 1. All Sessions, 2. Product Views etc. while putting all unnecessary stages under a single value.
- The basic formula is as follows. CASE WHEN…THEN statements can be stacked within the same calculated field.

```
CASE WHEN <dimension> = "<value>"
THEN "<value x>"
ELSE "<value y>"
END
```

Exercise Five: Custom Conversion Funnels

Expected Output