

## Hands-on Lab: Advanced Dashboard Capabilities in Google Looker Studio

Estimated time needed: 60 minutes

### Purpose of the lab:

This hands-on lab focuses on enhancing skills in utilizing advanced features of Google Looker Studio to create dynamic and interactive dashboards. It covers creating calculated fields, manipulating data points within visualizations, applying filters, and constructing navigation paths. This lab provides hands-on experience aimed at leveraging Google Looker Studio for complex data analysis and visualization tasks.

### Software used in this lab:

Google Looker Studio, available for free.

### Data set used in this lab:

Use data set [CustomerLoyaltyProgram.csv](#).

### Objectives:

1. Start a new dashboard
2. Use advanced Google Looker Studio dashboard capabilities
3. Create a bar chart using Drill Down
4. Create another bar chart to implement top/bottom filtering in visualizations
5. Create a horizontal bar chart using Drill Down and a calculated field
6. Create a pie chart
7. Add headings to all the created charts in the dashboard
8. Build an interactive dashboard
9. Save the dashboard and download as a PDF

### Step-by-step instructions

#### 1. Starting a new dashboard

- a. Sign in to Google Looker Studio:
  - o Go to Google Looker Studio and sign in with your Google account.
- b. Access the data set
  - o Here you are going to use the same data set that you have used in the previous lab and follow the same steps to upload the file.
  - o In the top left corner, click **Create**, then select **Data source**.
  - o In the **Search** box, type **file upload**, then click the **File Upload** connector.
  - o Click the **CLICK TO UPLOAD FILES** button, select the **CustomerLoyaltyProgram.csv** file, and click **Open**.
  - o Once the data is uploaded, click **CONNECT**.

## CustomerLoyaltyProgram .csv

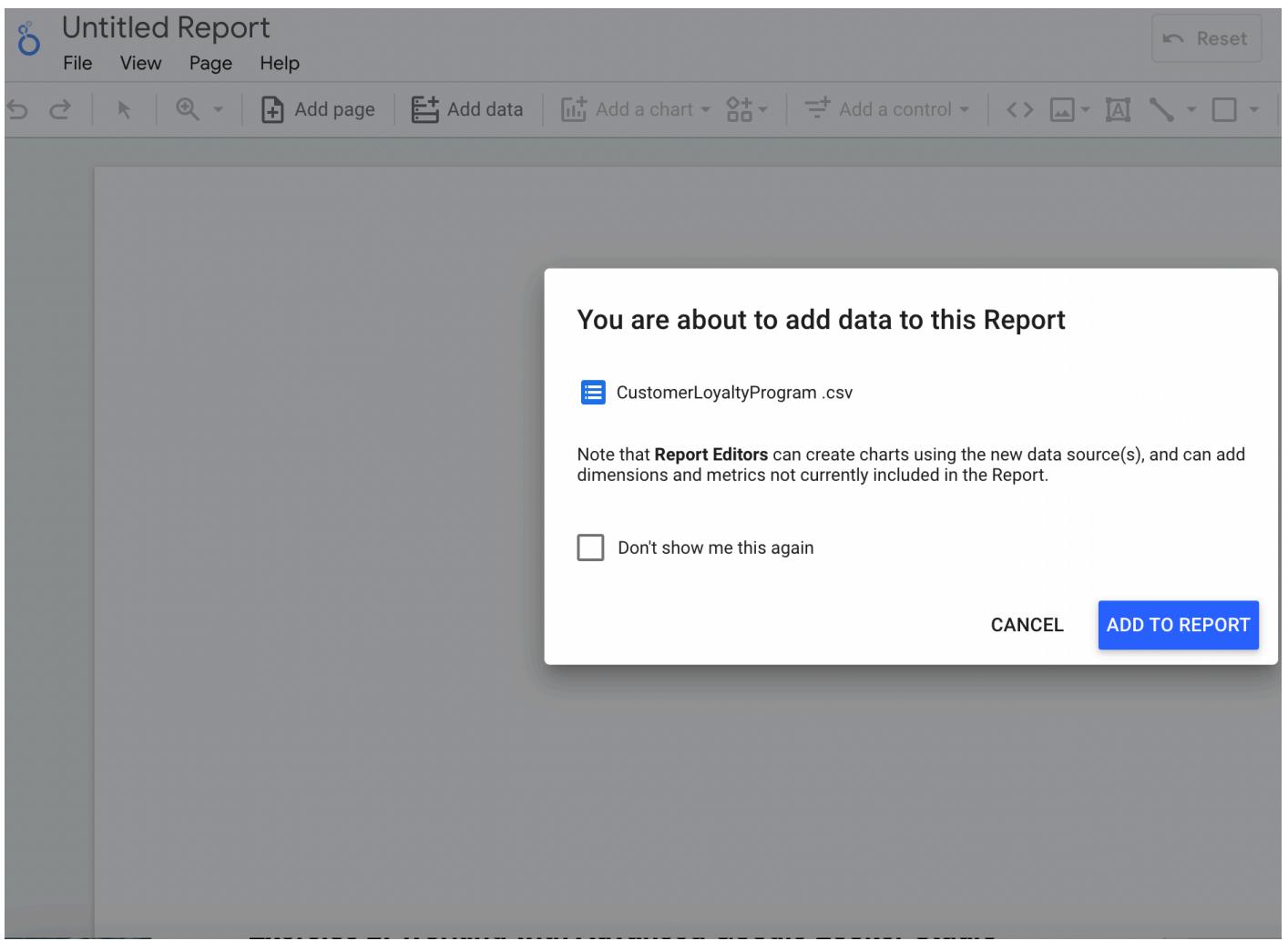
Scope: [Reusable](#) | Data credentials:  Shubhra Das | Data freshness: **12 hours** | Community visualizations access: **On** | Field

[EDIT CONNECTION](#) | [FILTER BY EMAIL](#)

| Field                   | Type    | Default Aggregation | Description |
|-------------------------|---------|---------------------|-------------|
| DIMENSIONS (28)         |         |                     |             |
| City                    | Text    | None                |             |
| Count                   | Number  | Sum                 |             |
| Country                 | Country | None                |             |
| Coupon Response         | Text    | None                |             |
| Customer Lifetime Value | Number  | Sum                 |             |
| Customer Name           | Text    | None                |             |
| Education               | Text    | None                |             |
| First Name              | Text    | None                |             |
| Gender                  | Text    | None                |             |
| Income                  | Number  | Sum                 |             |
| Last Name               | Text    | None                |             |
| Latitude                | Number  | Sum                 |             |
| Location Code           | Text    | None                |             |

## REFRESH FIELDS

- c. Create and add the report
  - o To start creating the report, click **CREATE REPORT**.
  - o In the pop-up dialog box, click **ADD TO REPORT**.



d. Save the new report

- Click the untitled report at the top and rename it to *Advanced Dashboard*.
- Save the new report.

2. Working with advanced Google Looker Studio dashboard capabilities

a. Create calculations

- In your Data Source, click + ADD A FIELD.
- Then select Add calculated field.

Reset View

Theme and layout

**Chart** **Data**

**SETUP** **STYLE**

**Data source**: CustomerLoy...

**Date Range Dimension**:

**Dimension**: City

**Metric**: SUM Quantity Sold

**Drill down**:

**Breakdown Dimension**:

**Add calculated field**

**Add group**

**Add a field** **Add a parameter** **Add Data**

CustomerLoyaltyProgram.csv Scope: Reusable Data credentials: Shubhra Das Data freshness: 12 hours Community visu

ALL FIELDS

| Available Fields | Field Name | Field ID        |
|------------------|------------|-----------------|
| Revenue          | Margin     | calc_v24pcfn7gd |
| Unit Cost        |            |                 |
| Unit Sale Price  |            |                 |
| Record Count     |            |                 |

Formula

|   |                 |   |           |
|---|-----------------|---|-----------|
| 1 | Unit Sale Price | - | Unit Cost |
|---|-----------------|---|-----------|

a. Name the field Margin and save it.

b. Set up filters and control widgets

- o Add filter controls.
- o From the toolbar, select **Add a control** and choose a drop-down list or slider based on the type of filter you need, such as **City**.

Reset Share View More Help

Add a control | Theme and layout | Pause updates

**Control**

**SETUP** **STYLE**

Data source: CustomerLoy...

Date Range Dimension: Add dimension

Control field: City

Default selection: value1, value2, v

Metric: SUM Quantity Sold

Show values:

Compact numbers:

**Data**

Search: CustomerLoyaltyProgram ...

- Latitude
- Location Code
- Longitude
- Loyalty Count
- Loyalty#
- LoyaltyStatus
- Margin
- Marital Status
- MonthsAsMember
- Order Year
- Postal code
- Product Line
- Province or State
- Quantity Sold
- Quarter
- Revenue
- Unit Cost
- + Add a field
- + Add a parameter

**Properties**

**Filter**

a. Position the filter control on the dashboard.

c. Add score cards

- Now you will include two scorecards to display **Margin** and **Revenue** on the top of your dashboard.
- In the toolbar, click **Add a chart**, and select **Scorecard**.
- Move it above the line chart visualization and to the left side of the canvas.
- And pick **Margin** to be displayed on this scorecard.
- In the Chart – Set Up area, click the left side of the **Margin** field and then you will see the following dialog box.
- Select the data type and aggregation.

The screenshot shows a software interface for managing data. At the top, there are buttons for 'Reset', 'Share', 'View', and user profile. Below these are 'Control' and 'Theme and layout' settings, along with a 'Pause updates' button.

The main area is a configuration panel for a metric named 'AVG Margin'. It includes fields for 'Name' (set to 'Margin'), 'Data Type' (set to 'Currency (USD - US Dollar (\$))'), 'Display Format' (set to 'Default'), 'Aggregation' (set to 'Average'), 'Comparison calculation' (set to 'None'), and 'Running calculation' (set to 'Running average').

To the right of the configuration panel is a sidebar with three tabs: 'Data', 'Properties' (which is currently selected), and 'Filter bar'. The 'Data' tab lists various data fields such as Latitude, Location Code, Longitude, Loyalty Count, Loyalty#, LoyaltyStatus, Margin, Marital Status, MonthsAsMember, Order Year, Postal code, Product Line, Province or State, Quantity Sold, Quarter, Revenue, and Unit Cost. There are also buttons for 'Add a field', 'Add a parameter', and 'Add Data'.

- You can change the size and position as you like.
- Use the **STYLE** tab in the scorecard chart's **Properties** pane to change the color and change the font size to **28pt** and then select **Background and Border**.

Total 1,168

Chart

SETUP STYLE

A 28px Roboto

Hide Metric Name

Metric name

Metric value

Comparison

Background and Border

Data

CustomerLoyaltyProgram ....

123 Latitude

RBC Location Code

123 Longitude

123 Loyalty Count

123 Loyalty#

RBC LoyaltyStatus

123 Margin

RBC Marital Status

123 MonthsAsMember

123 Order Year

RBC Postal code

RBC Product Line

RBC Province or State

123 Quantity Sold

RBC Quarter

123 Revenue

123 Unit Cost

+ Add a field

+ Add a parameter

+ Add Data

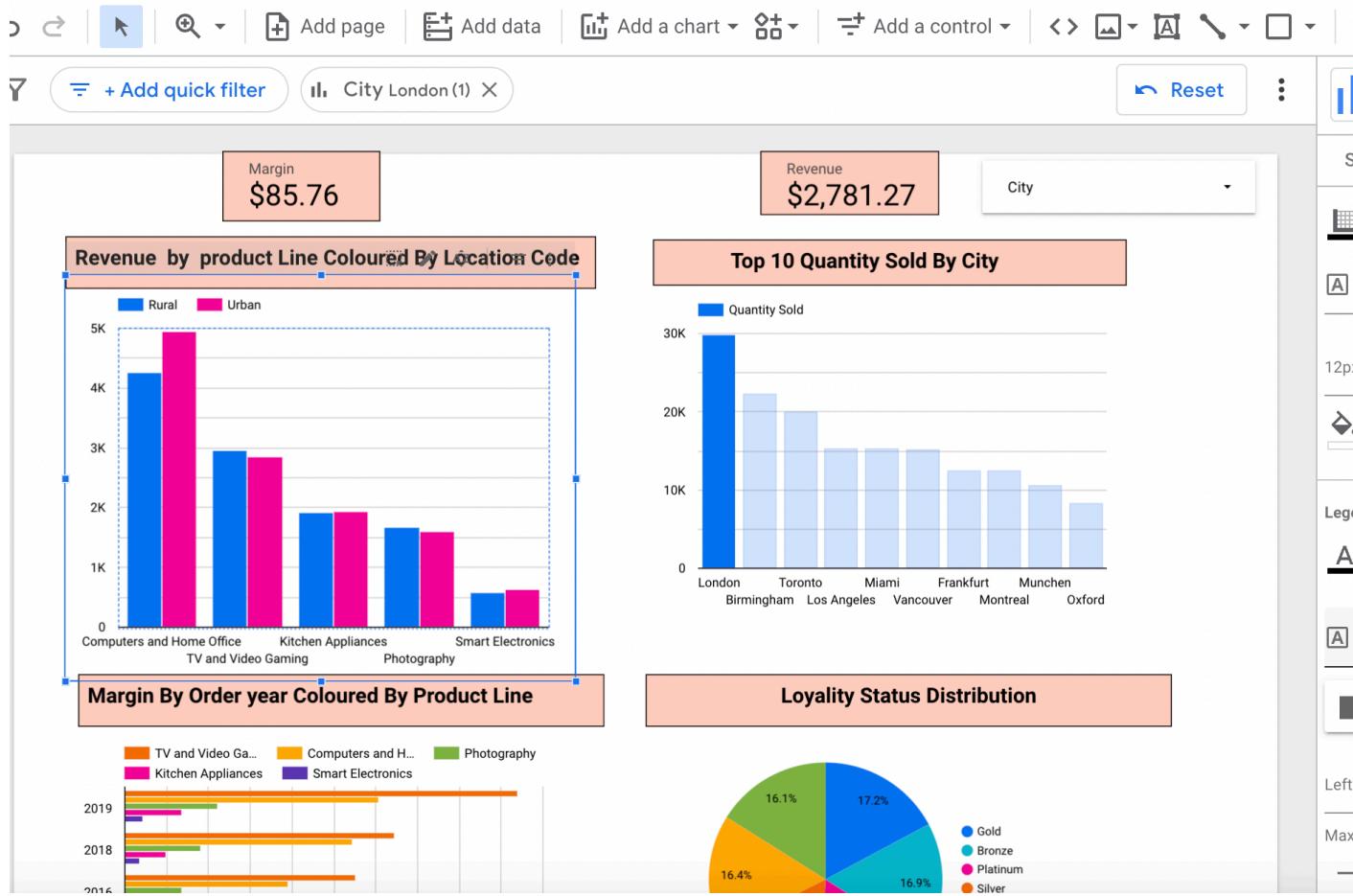
- Now you will add the second scorecard chart above the line chart.
- In the toolbar, click **Add a chart**, and select **Scorecard**.
- Place it to the right of the **Revenue** scorecard chart.
- Select the data type and aggregation.
- Then use the same size and style as **Margin**.



# Advanced Dashboard

File Edit View Insert Page Arrange Resource Help

[Reset](#)



3. Creating a bar chart

a. Create a bar chart (Revenue By Product Line By Location Code) using Drill Down

- Add a bar chart to your dashboard.
- Then drag the **Product Line** field to **Dimensions** (in the SET UP area)
- Then drag the **Location Code** field to **Breakdown Dimension**
- Then drag the **Revenue** field to **Metric** (change it to Average)



# Advanced Dashboard

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[Reset](#)



Add page



Add a chart



Add a control



+ Add quick filter

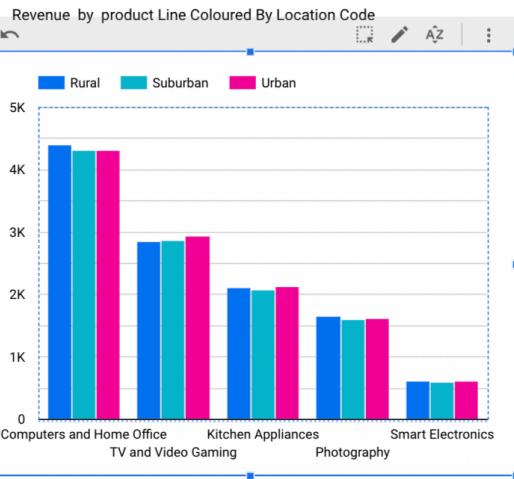
[Reset](#)



Margin  
\$84.34

Revenue  
\$2,709.05

First Name



b. Exclude data points from the visualization

o Add a filter in the **Location Code**



## Advanced Dashboard

File Edit View Insert Page Arrange Resource Help

[Reset](#)[Add page](#) [Add data](#) [Add a chart](#) [Add a control](#) [Add a chart](#) [Add a control](#) [Add a chart](#) [Add a control](#)[+ Add quick filter](#) [Reset](#) [More](#)Margin  
\$84.34Revenue  
\$2,709.05

First Name

Revenue by product Line Coloured By Location Code

Edit | A-Z | ...

Create Filter

Name

[CustomerLoyaltyProgram.csv](#)

Exclude

ABC Location Code

Equal to (=)

Suburban

AND

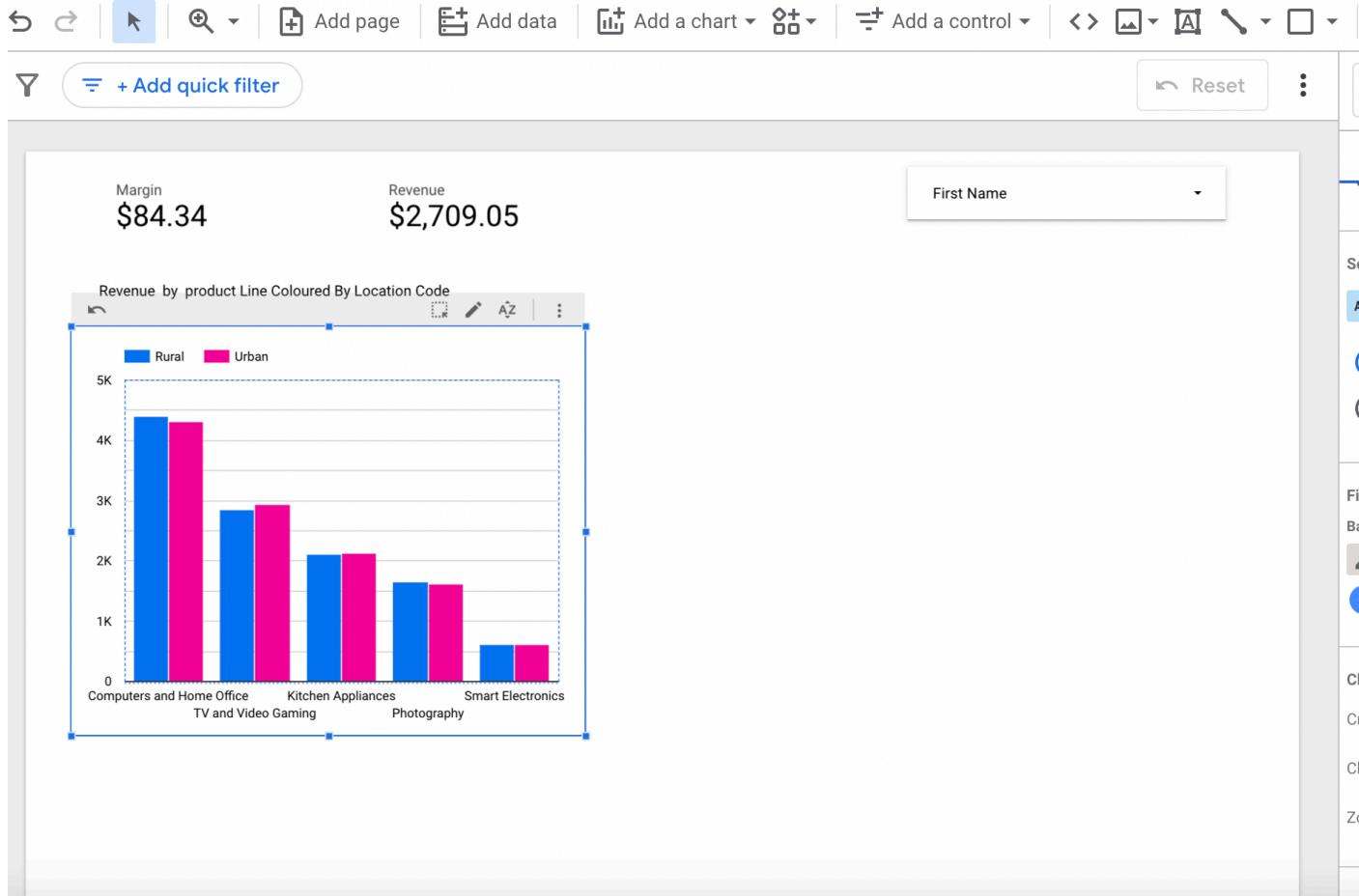
This filter has 1 clause

o And exclude Suburban

# Advanced Dashboard

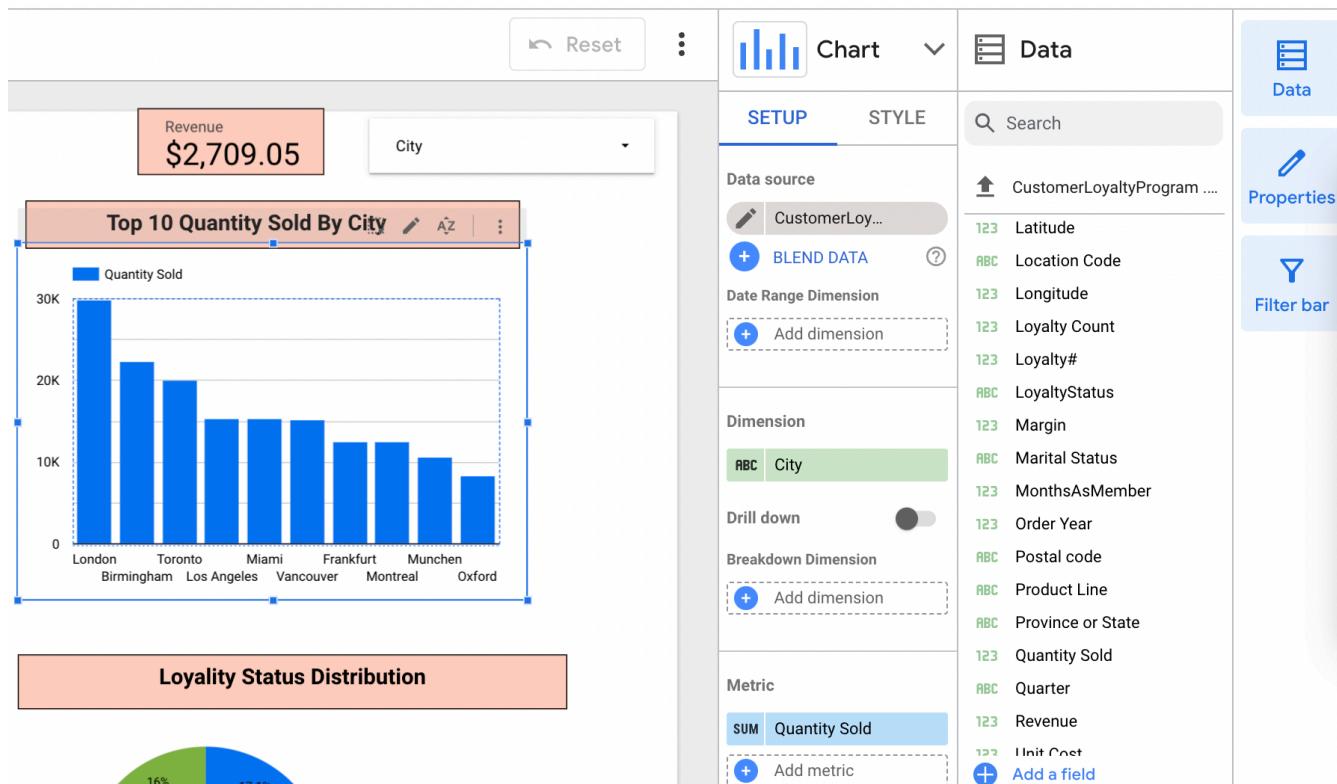
File Edit View Insert Page Arrange Resource Help

[Reset](#)



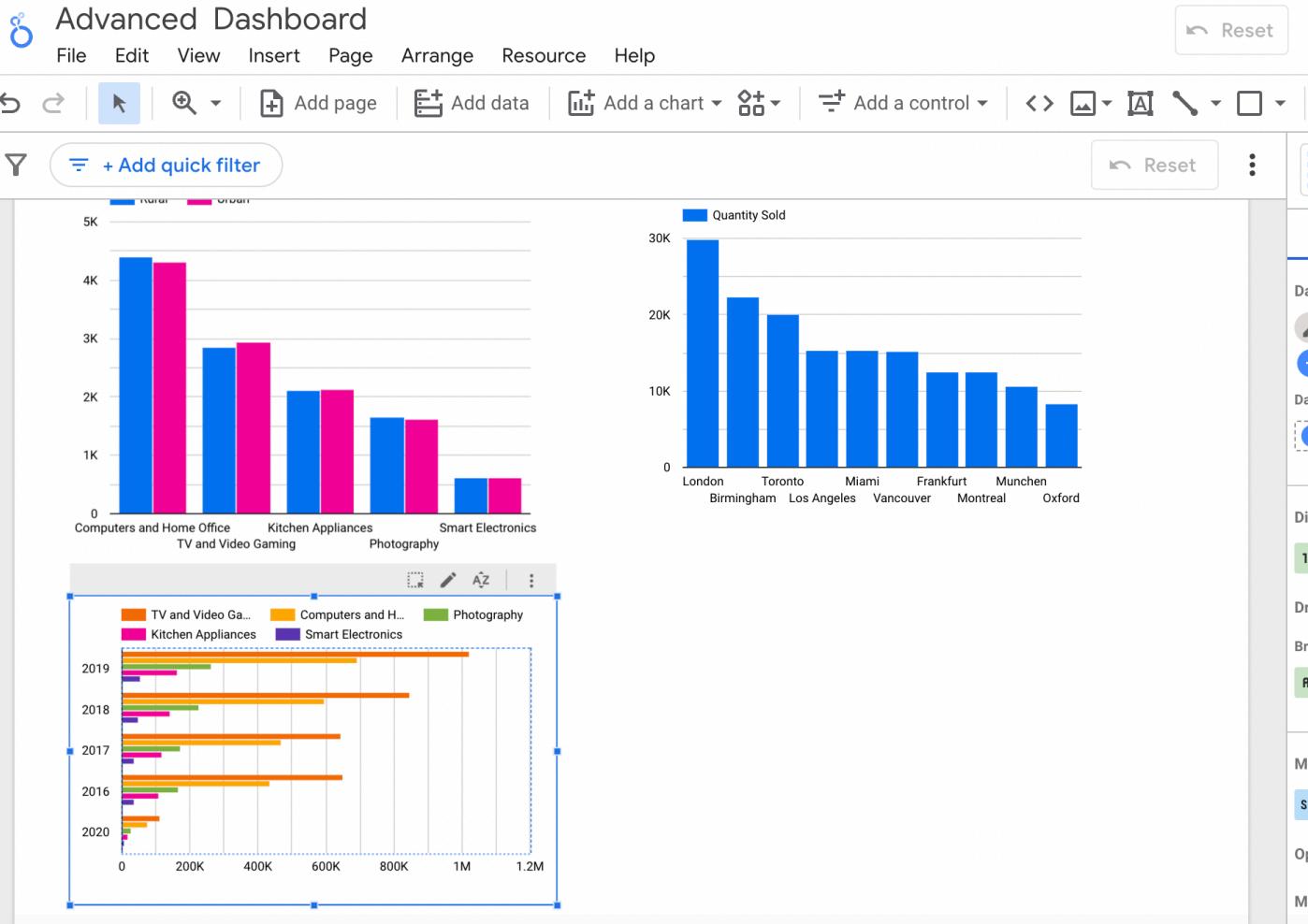
#### 4. Creating another bar chart to implement top/bottom filtering in visualizations

- Add a bar chart to your dashboard.
- Sort the data in the chart's data properties
- Limit the number of bars to show top 10
- Then drag the City field to Dimensions (in SET UP area)
- Then drag the Quantity Sold field to Metric



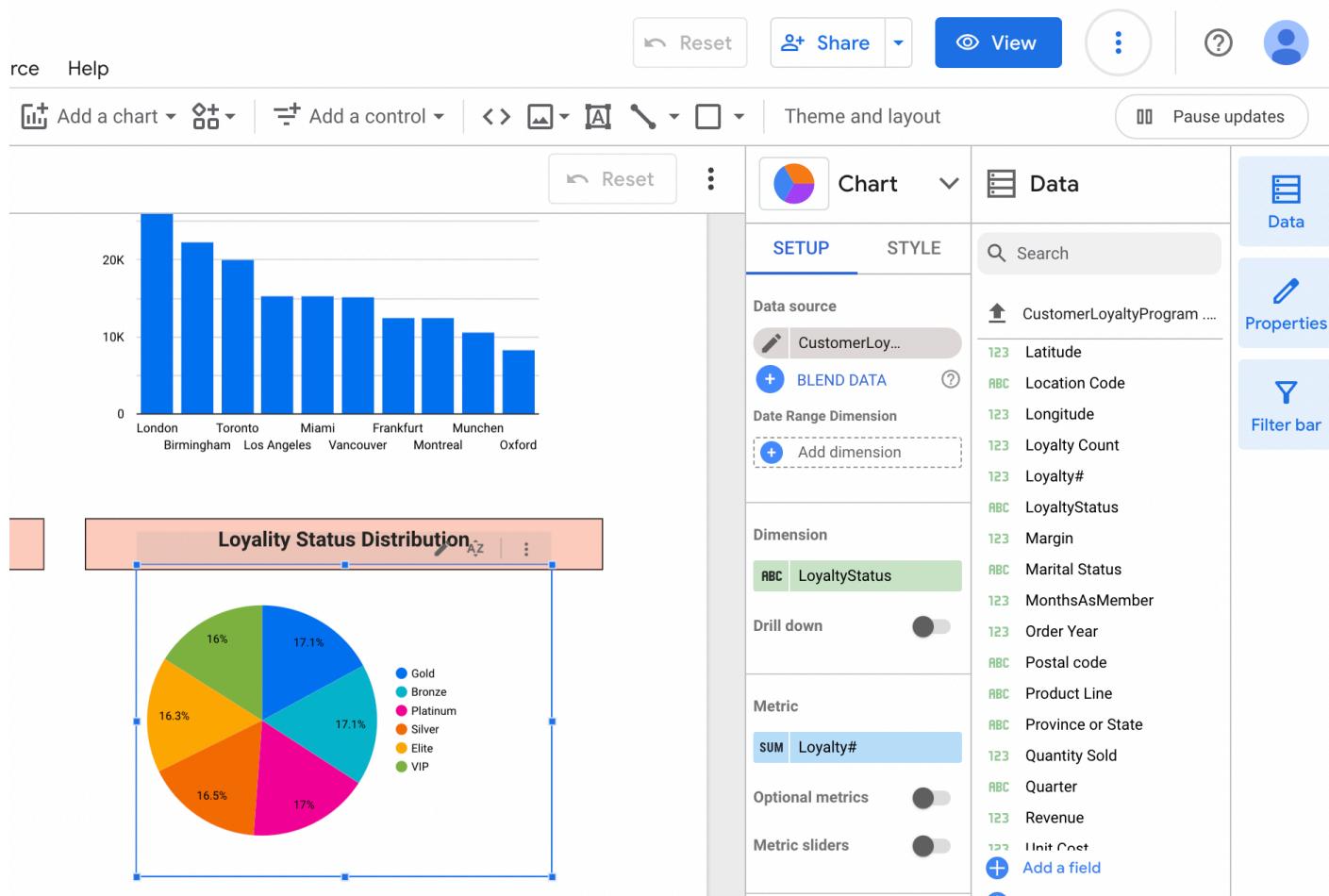
#### 5. Creating a horizontal bar chart (Margin By Order Year Colored By Product Line) using Drill Down

- Add a horizontal bar chart to your dashboard
- Then drag the Order Year field to Dimensions (in SET UP area)
- Then drag the Product Line field to Breakdown Dimension
- Then drag the Margin calculated field to Metric



### 6. Creating a pie chart of Loyalty Status Distribution

- Add a pie chart to your dashboard
- Then drag the Loyalty Status field to Dimensions (in the SET UP area)
- Then drag the Loyalty# field to Metric



### 7. Adding headings to all the created charts in the dashboard

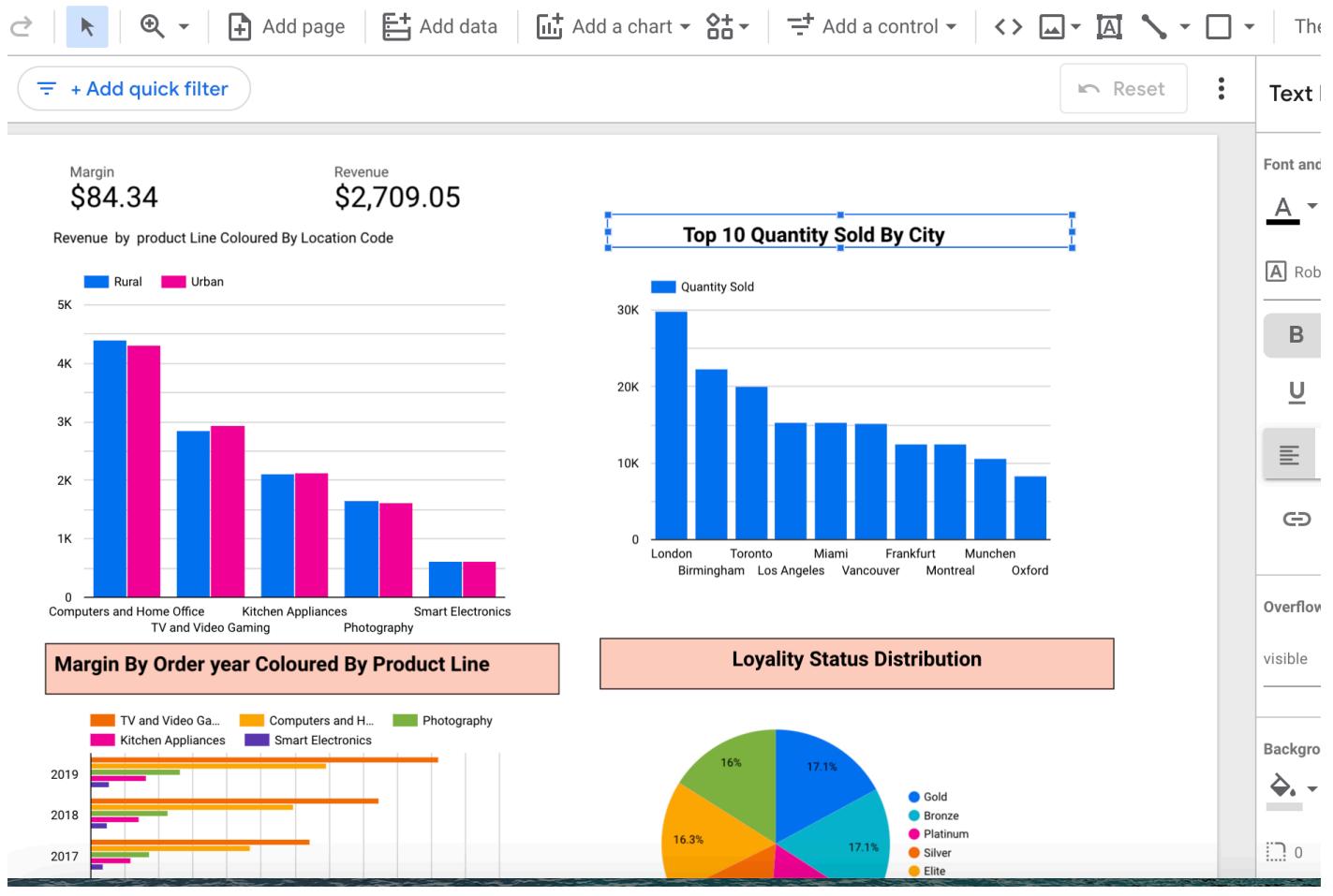
- On the top of each chart, add a text box and enter the heading and use the text properties to make the text bold and fill it with color and provide a boundary.

## Advanced Dashboard

File Edit View Insert Page Arrange Resource Help

Reset

+



### 8. Building an interactive dashboard

- Filter data in the current tab (selecting a city)

Font and

**A**

**A** Rob

**B**

**U**

**E**

**C**

Overflow

visible

Background

0

# Advanced Dashboard

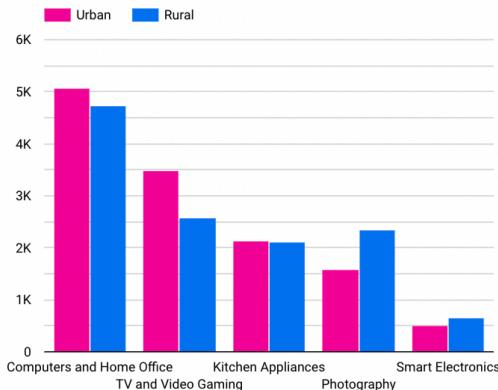
[Reset](#)

File Edit View Insert Page Arrange Resource Help

Back Forward Search Add page Add data Add a chart Add a control Reset
+ Add quick filter City Munchen (1) Reset

**Margin**  
**\$81.13**

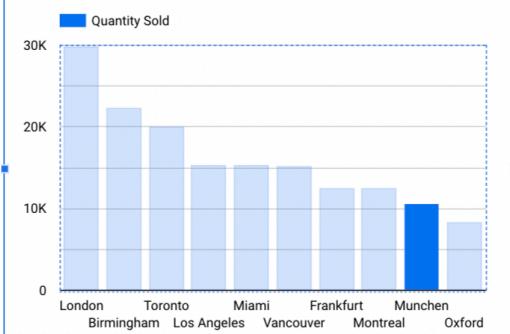
## Revenue by product Line Coloured By Location Code



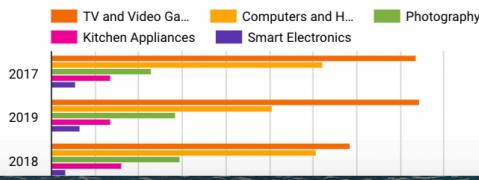
**Revenue**  
**\$2,736.85**

City

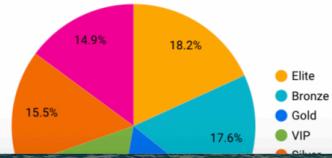
## Top 10 Quantity Sold By City



## Margin By Order year Coloured By Product Line



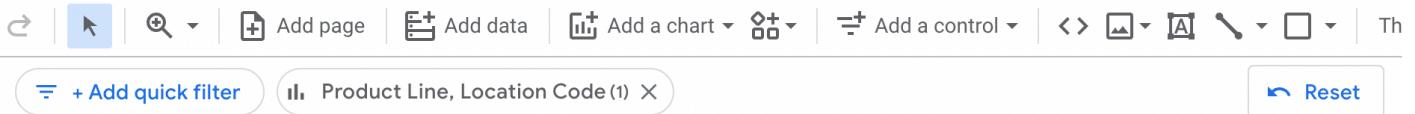
## Loyalty Status Distribution



Filter data in the current tab (selecting a product line)

# Advanced Dashboard

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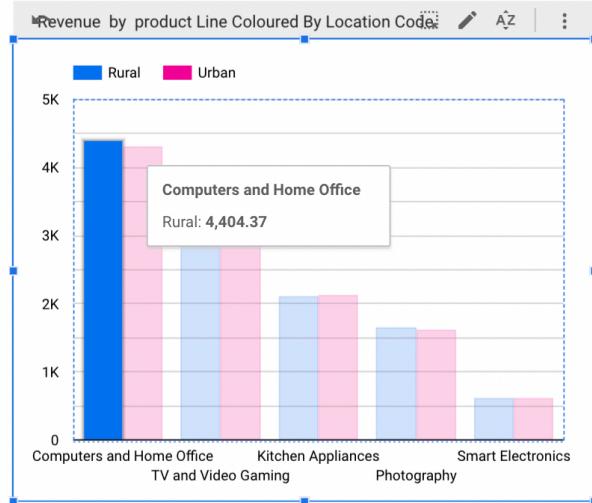
+ Add quick filter

Product Line, Location Code (1) X

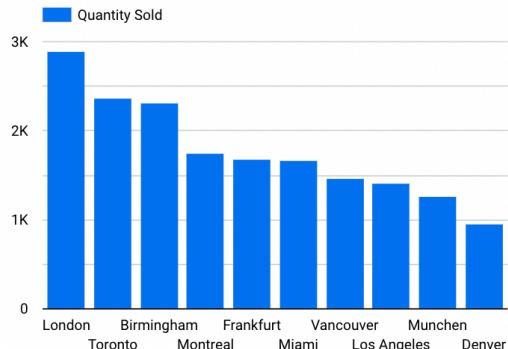
Reset

\$114.32

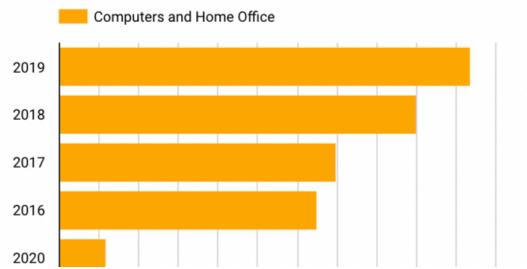
\$4,404.37



Top 10 Quantity Sold By City



Margin By Order year Coloured By Product Line



## 9. Saving the dashboard and downloading as a PDF

- Finalize the dashboard.
  - Ensure all visualizations are correctly configured and aligned.
  - Preview the dashboard in View mode to check interactivity and finalize the design.
- Save the dashboard.
- Download as a PDF (you can also share your PDF).

Congratulations! You have completed this lab and are ready for the next topic.

## Author(s)

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## Other Contributor(s)

Jyothi Mani, Steve Ryan