(Optional) Hands-on Lab: Advanced charts in Looker Studio

Estimated time needed: 30 minutes

In this lab session, you'll be instructed on utilizing third-party tools for advanced visualization techniques. Following that, you'll delve into creating a bubble chart and word cloud specifically within Looker Studio.

Software used in this lab

Like the videos in the course, for the hands-on labs, we will be using Google's **Looker Studio** as this is available at no charge.

Data set used in this lab

The data set used in this lab comes from IBM Cognos Analytics. This data set is published by IBM. You can download the data set file directly from here: CustomerLoyaltyProgram.csv.

Objectives

After completing this lab, you will be able to:

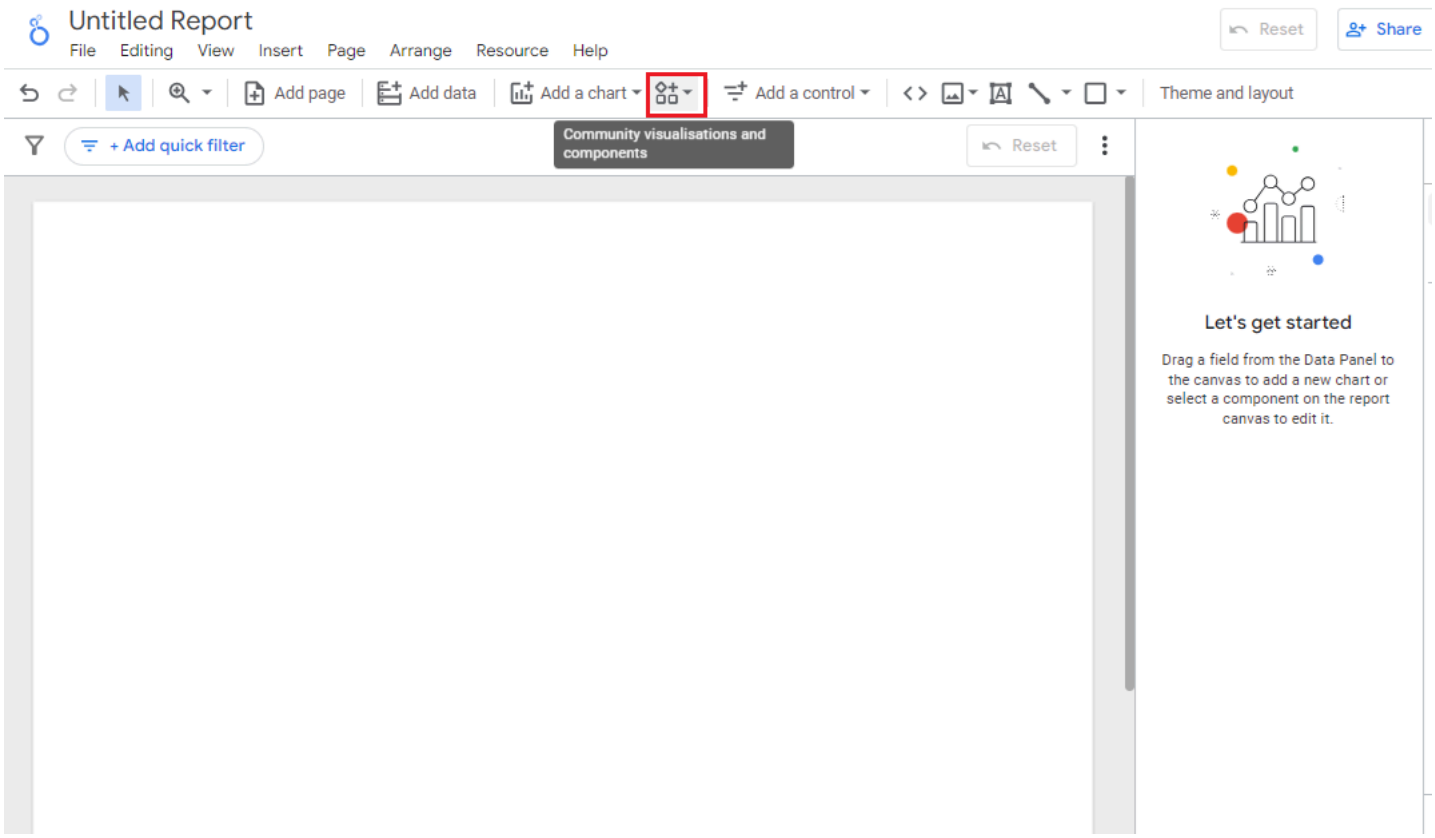
- Utilize community visualizations.
- Create a word cloud.
- Create a scattered bubble chart.

  Note: Sign in to Google Looker Studio and Make sure you have uploaded the dataset as shown in the previous labs. Properly uploading the dataset is essential for the successful completion of this lab exercise.

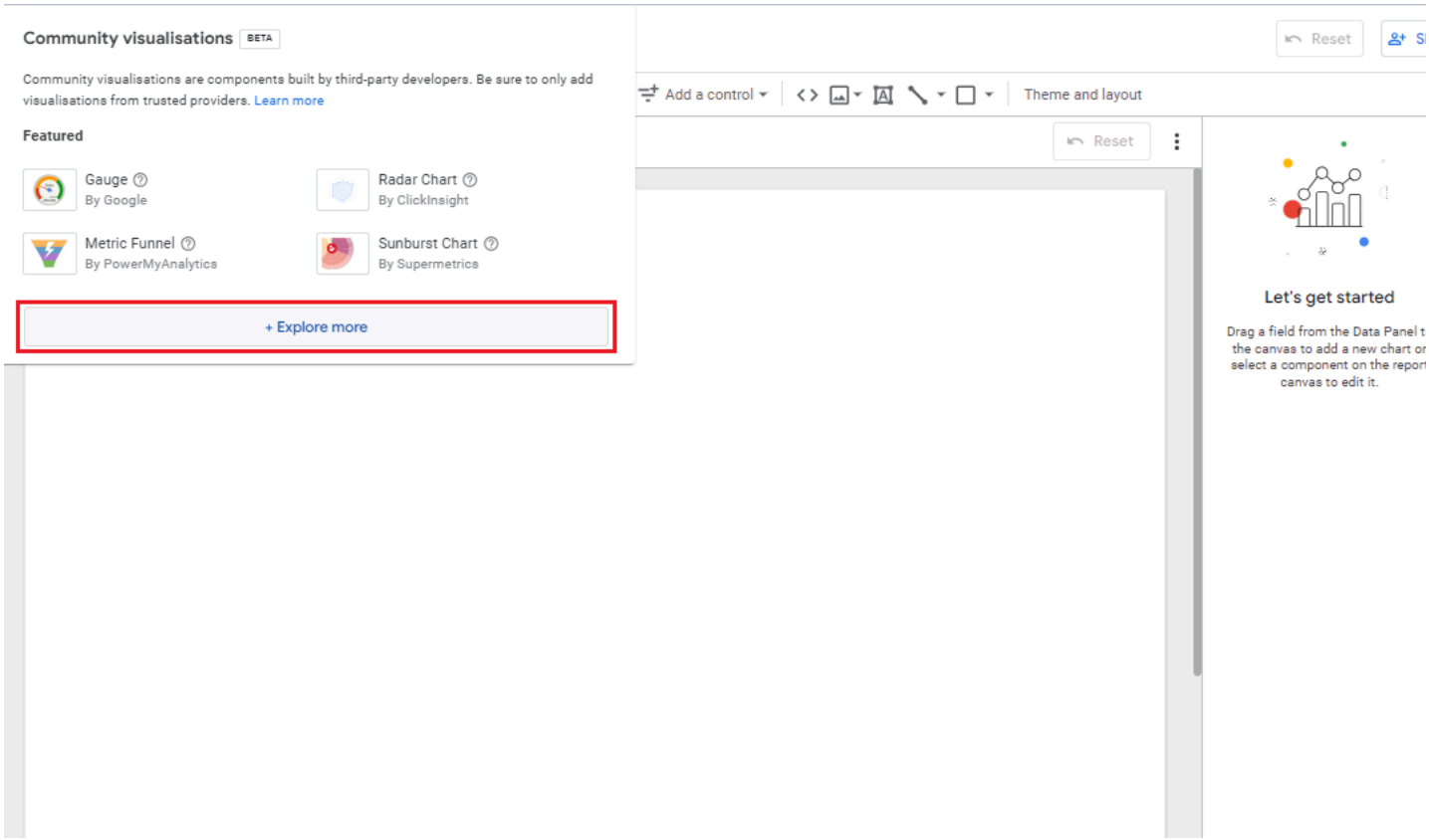
Exercise 1: Create a word cloud using community visualization tools

In this exercise, you will discover how to utilize community visualization tools to create various graphs that are not directly available in Looker Studio.

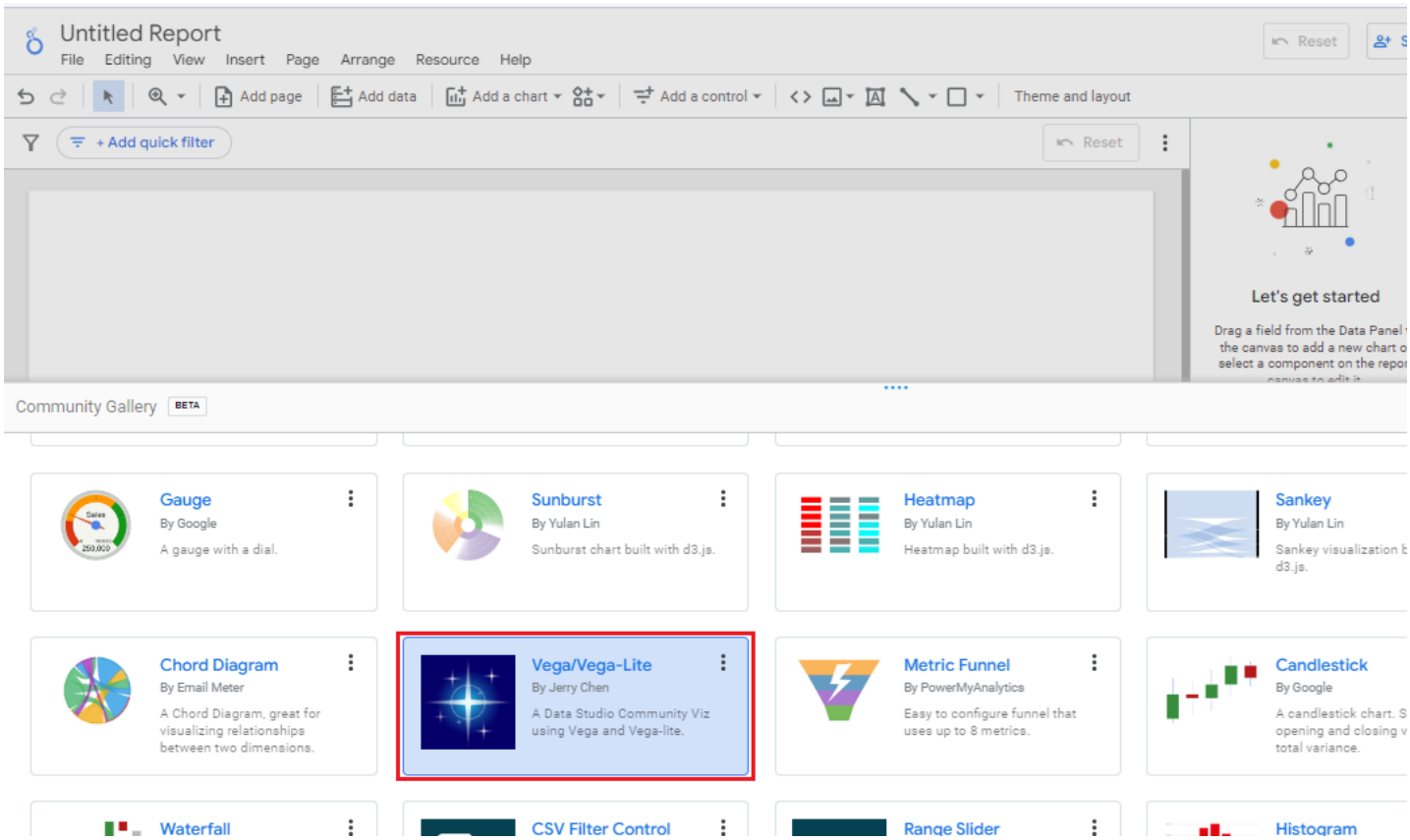
1. Start with the blank page and click on the **Community Visualization and Components**.



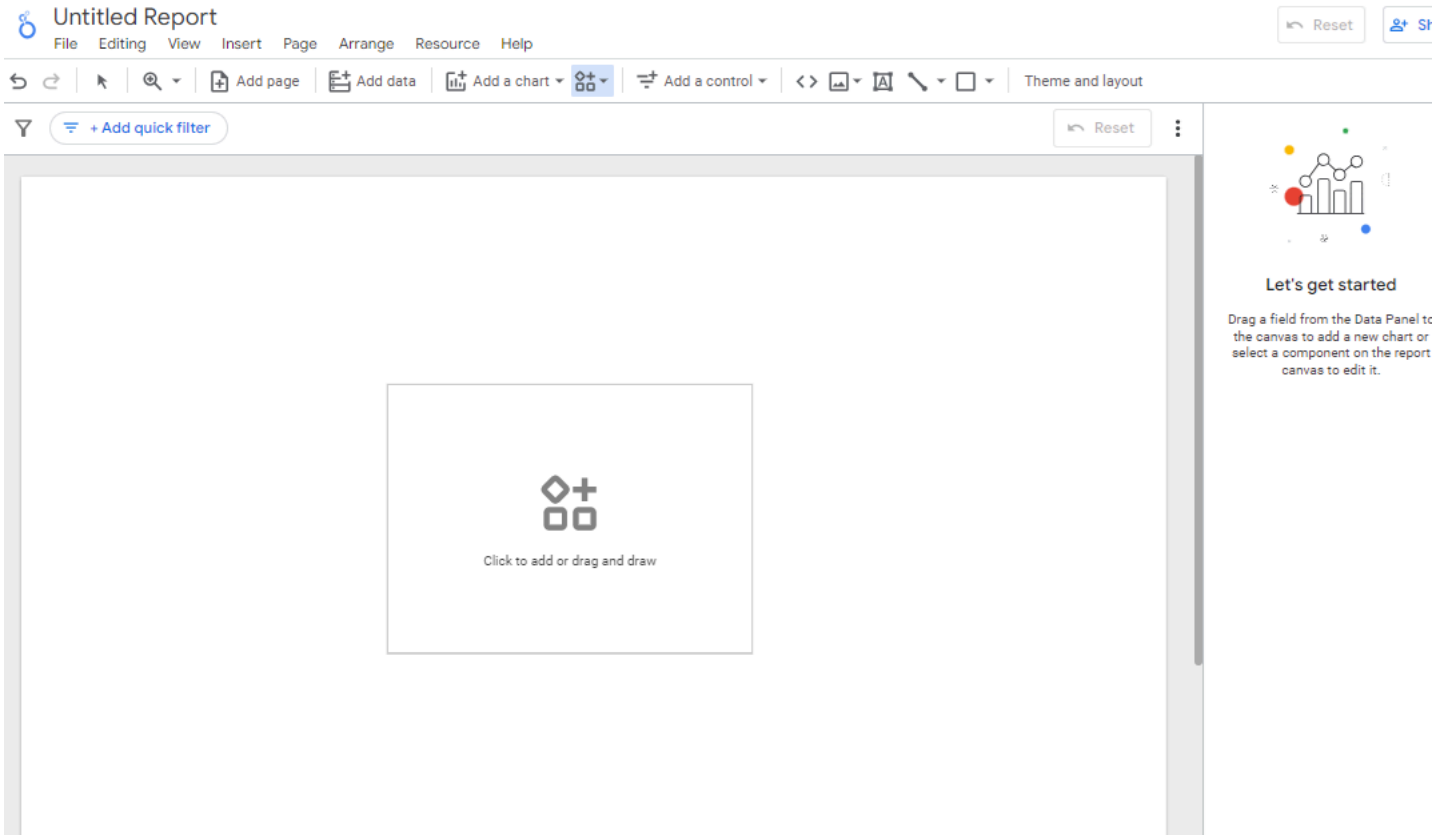
2. After selecting **Community Visualization and Components**, a popup will appear. Next, click **Explore More**.



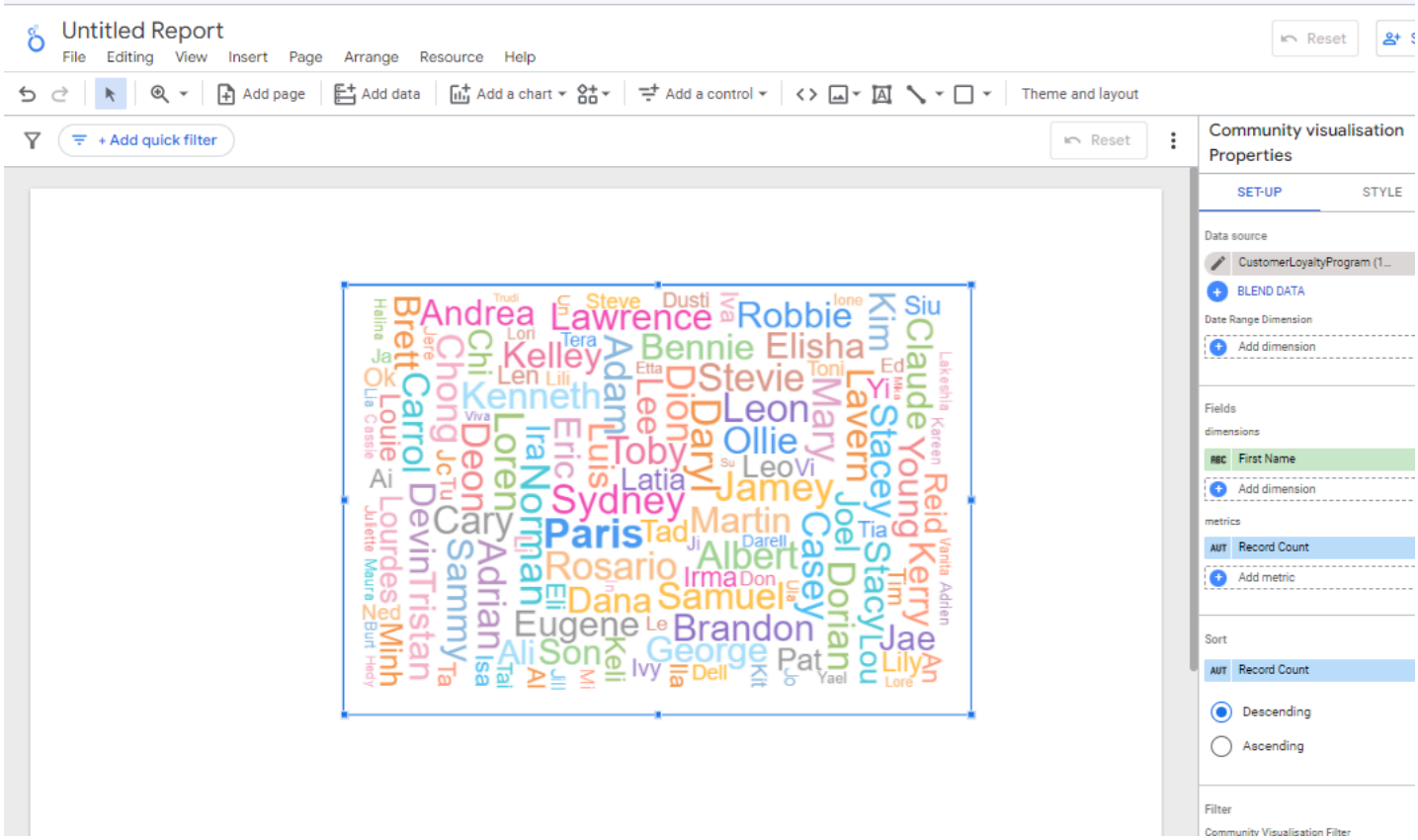
3. You will be redirected to the Community Gallery. Now, scroll down and search for the **Vega/Vega-Lite** option. Select it, and grant access by clicking the Allow button.



4. After clicking on the **Vega/Vega-Lite**, a blank graph will appear on the canvas with your cursor. Click on the canvas to finalize and display the blank graph.

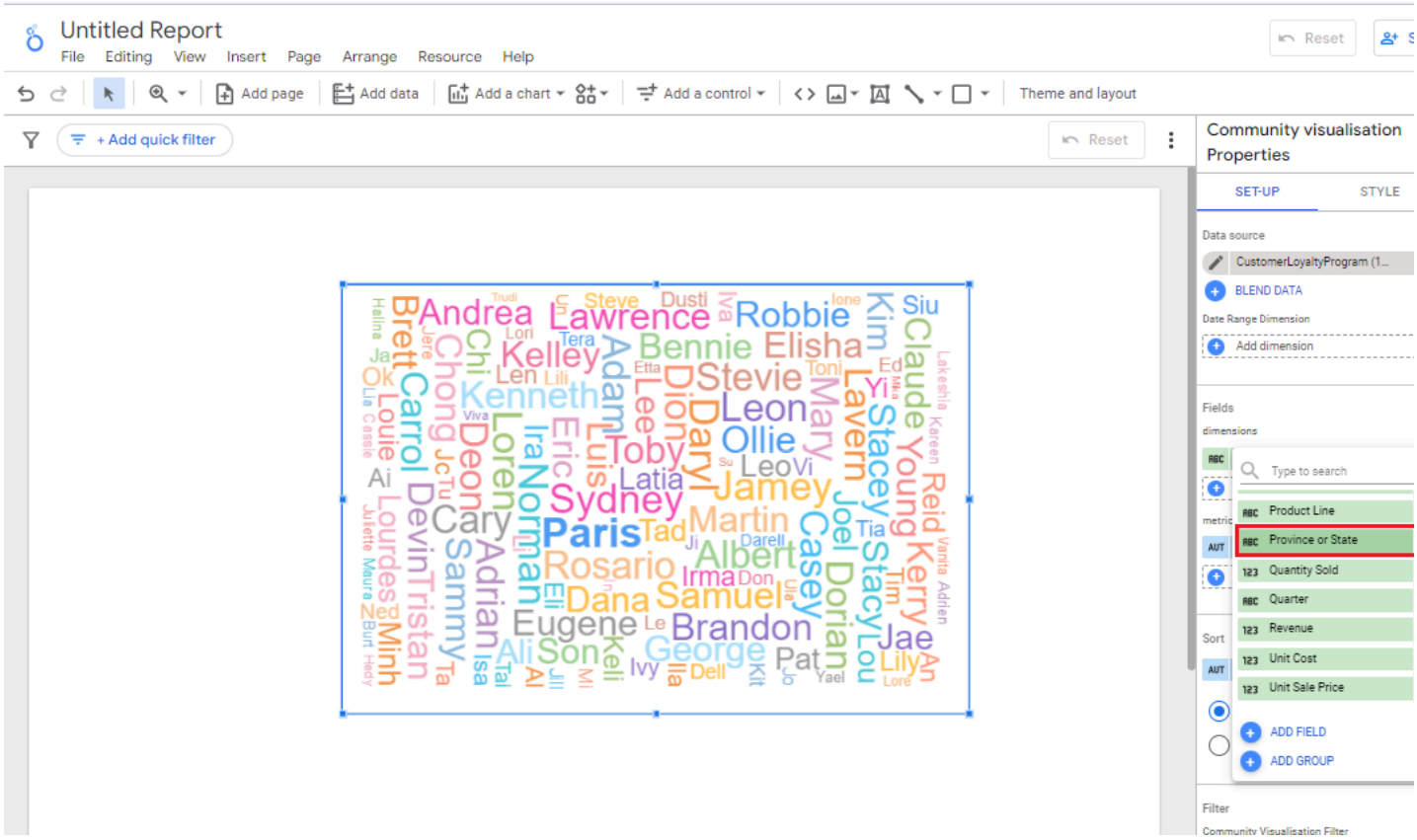


5. By default, it will appear as shown in the screenshot below. We will proceed to adjust the dimensions and metrics.

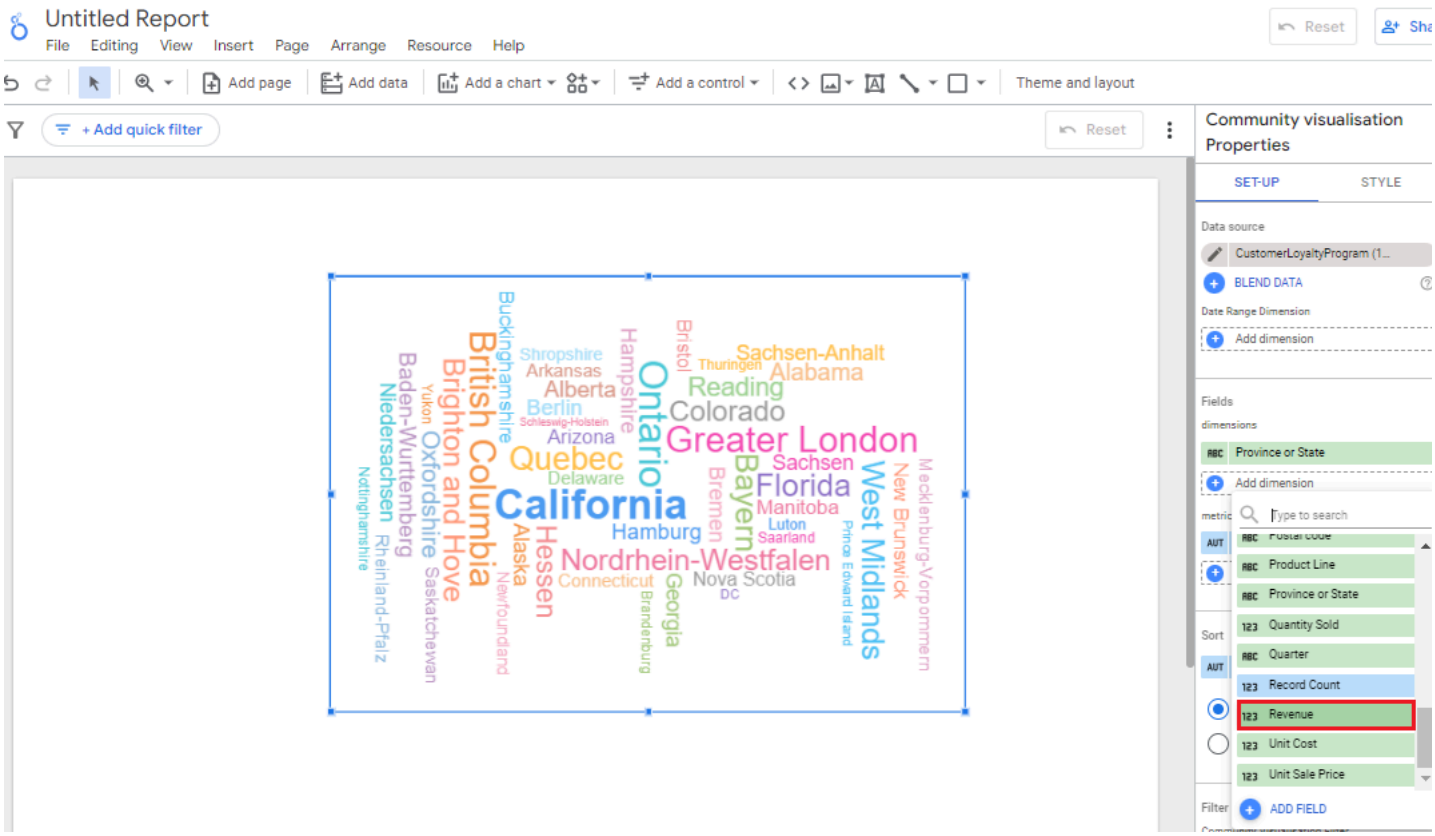


6. Change the dimension from `First Name` to `Province or State` and metrics from `Record count` to `Revenue`.

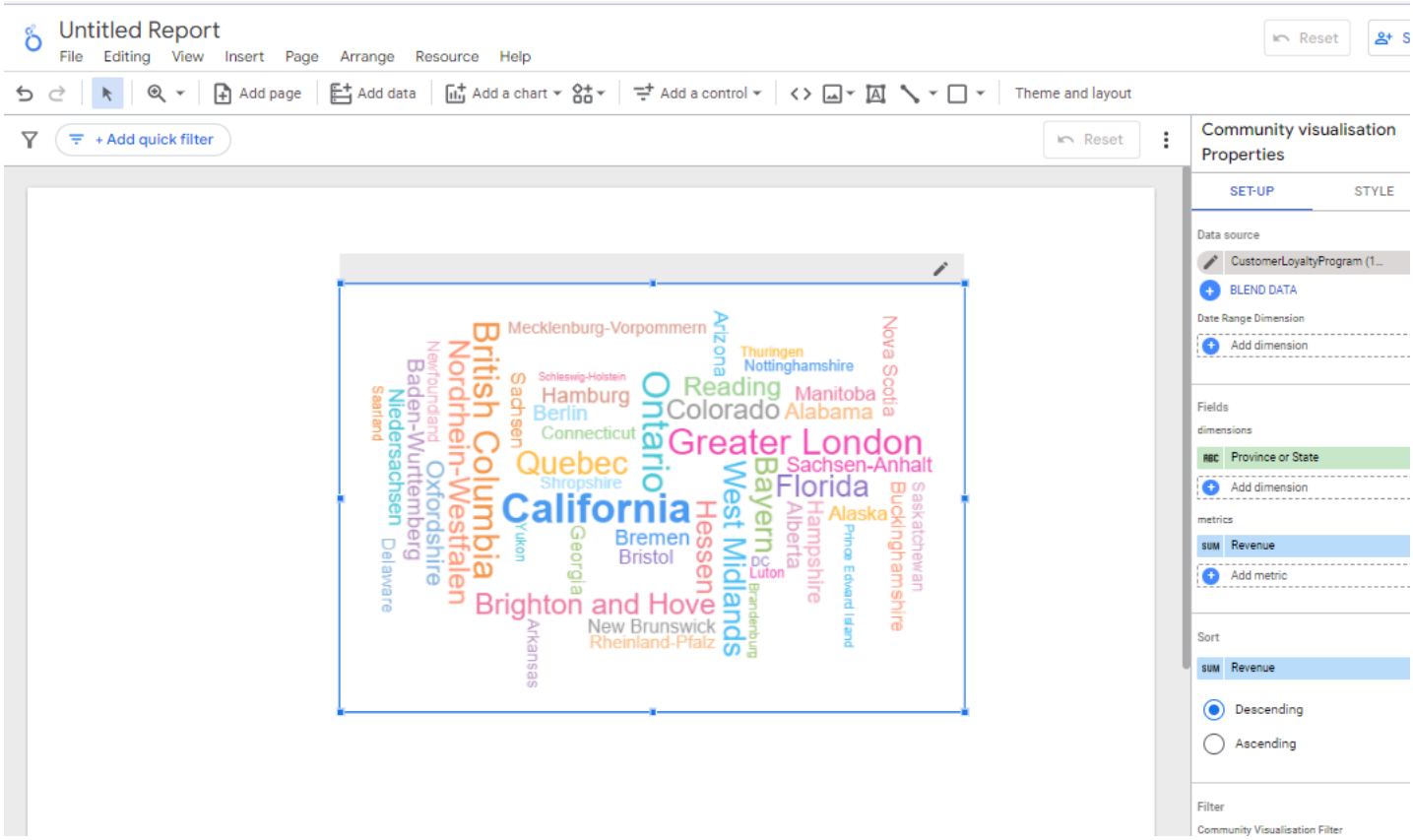
Dimension:



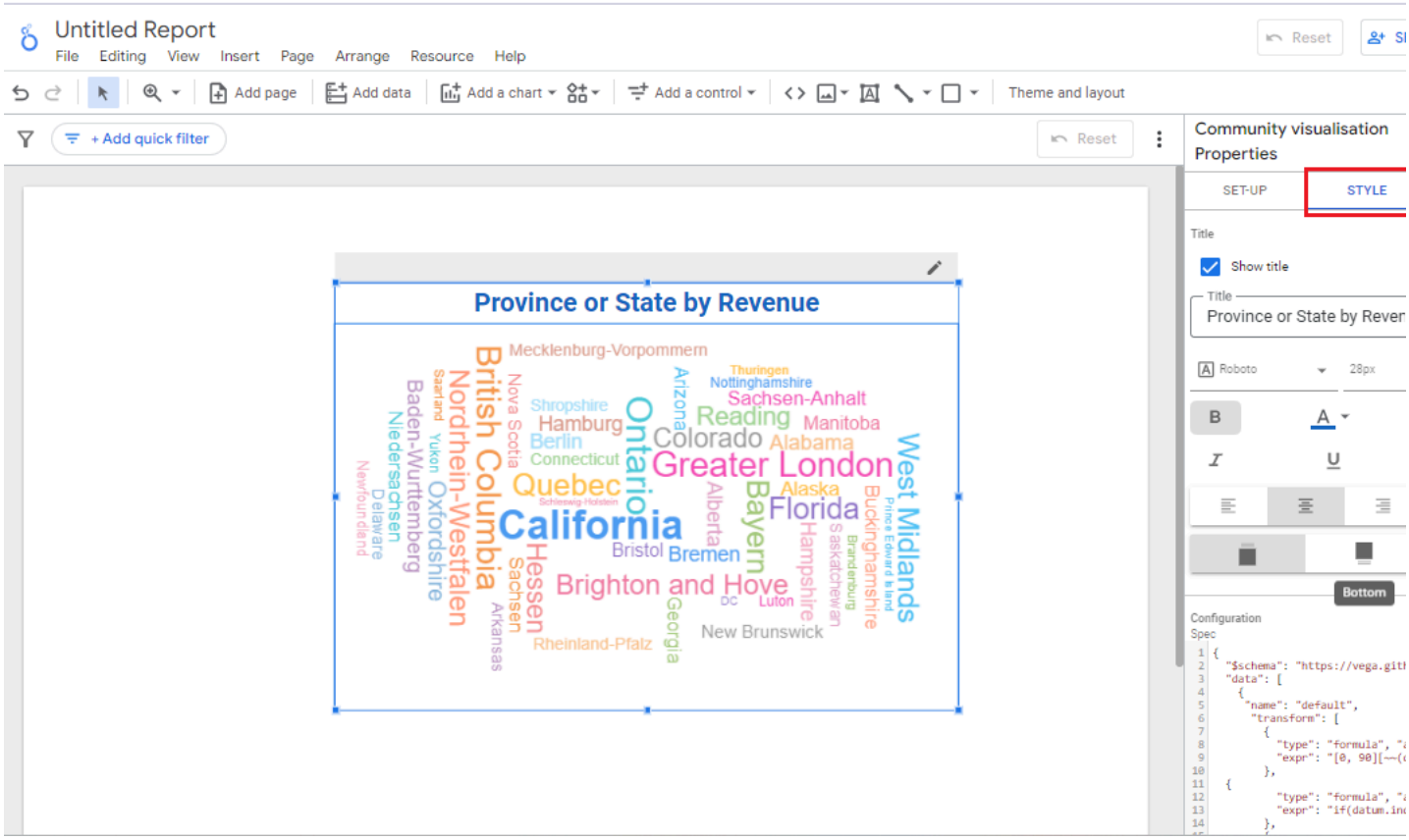
Metrics:



7. Now, this final graph represents a word cloud of **Province or State by Revenue**.



8. In the Style tab, set the title of the graph as **Province or State by Revenue** and align it in the center.



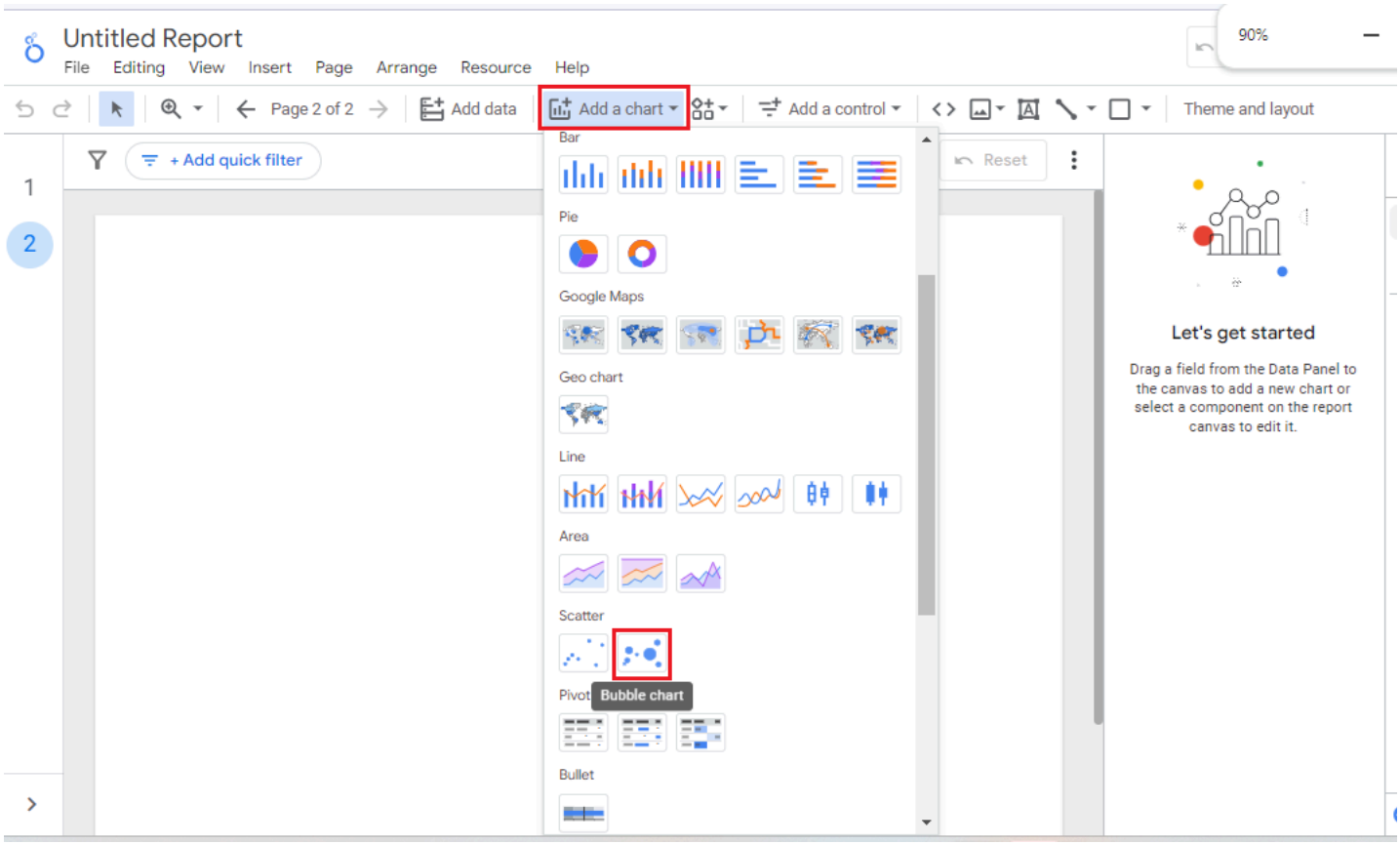
A above word cloud of **Province or State by Revenue** visualizes the relationship between different provinces or states and their corresponding revenue levels. In this visualization, the size of each province or state name within the cloud is proportional to its revenue. Typically, larger font sizes represent higher revenue values, while smaller font sizes represent lower revenue values. This type of visualization offers a quick and intuitive way to identify which provinces or states contribute the most to overall revenue and which ones contribute less.

Exercise 2: Create a Scatter bubble chart using multiple dimension

A scatter bubble chart with multiple dimensions is a powerful tool for visualizing data that has more than two dimensions. In a traditional scatter plot, you have two axes (X and Y) representing two variables, and you plot individual data points accordingly. However, in a scatter bubble chart with multiple dimensions, you can represent additional variables by using the size and color of the bubbles in addition to the X and Y coordinates.

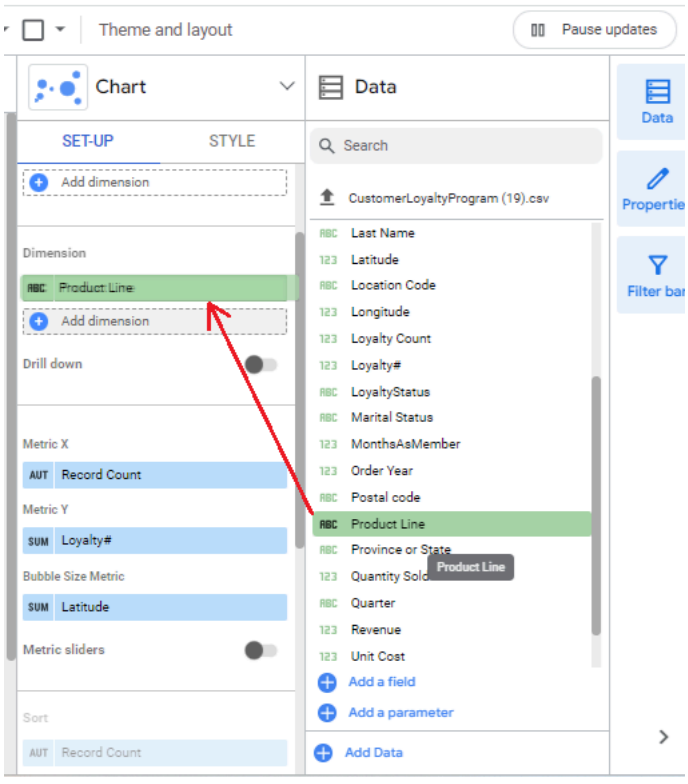
Here, we'll create a visualization showcasing the relationship between **Product Line, LoyaltyStatus, and Quantity sold**.

1. To start, go to the toolbar and click **Add page**.
2. To add a new chart, click **Add a chart** and select a **scatter bubble chart**.

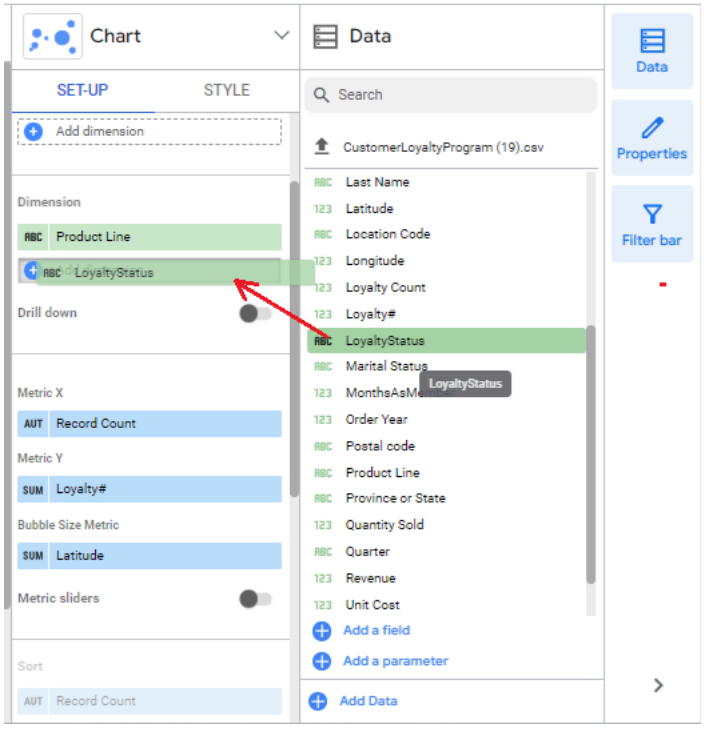


3. Click on the canvas where you want it to be positioned. Click on the scatter bubble chart in the canvas, and then click **Properties**.

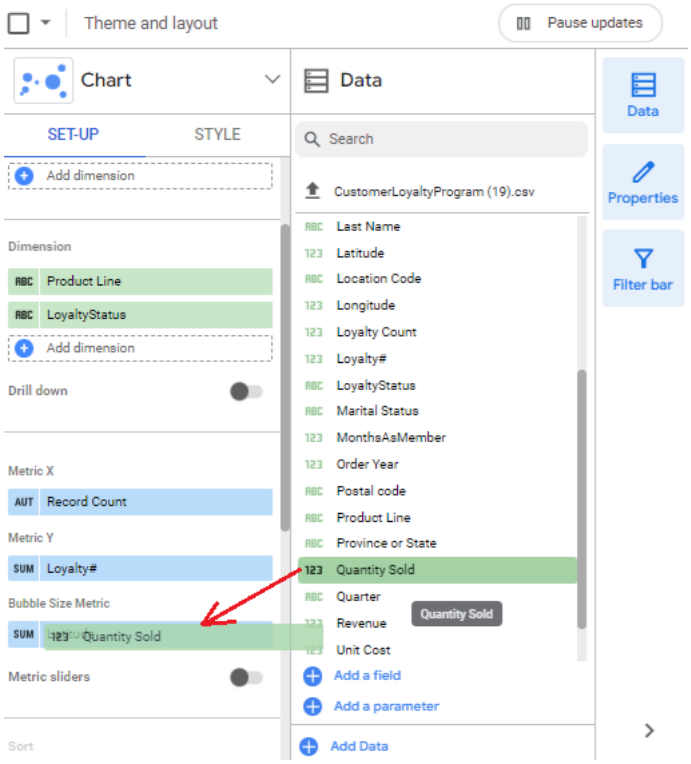
4. Under the setup tab, we will change the dimensions and metrics to get the desired scatter bubble chart. From the data pane, drag **Product Line** to the Dimension field to replace **First Name**.



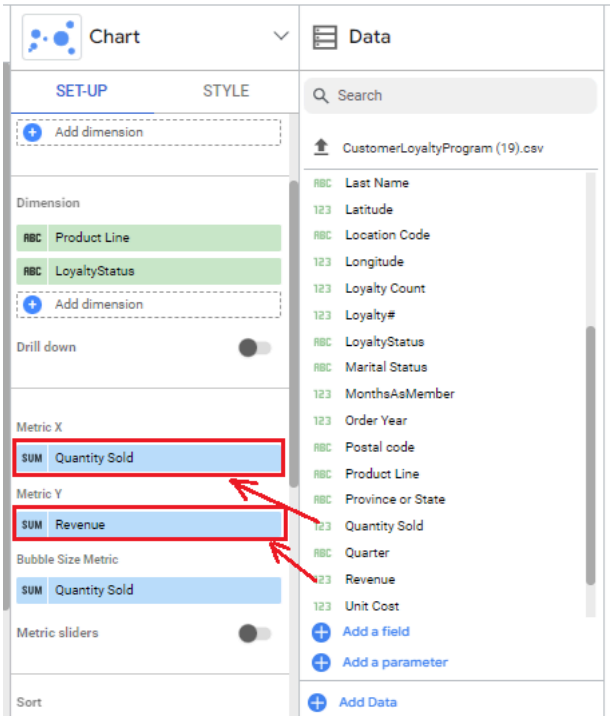
5. Now add one more dimension for **LoyaltyStatus**.



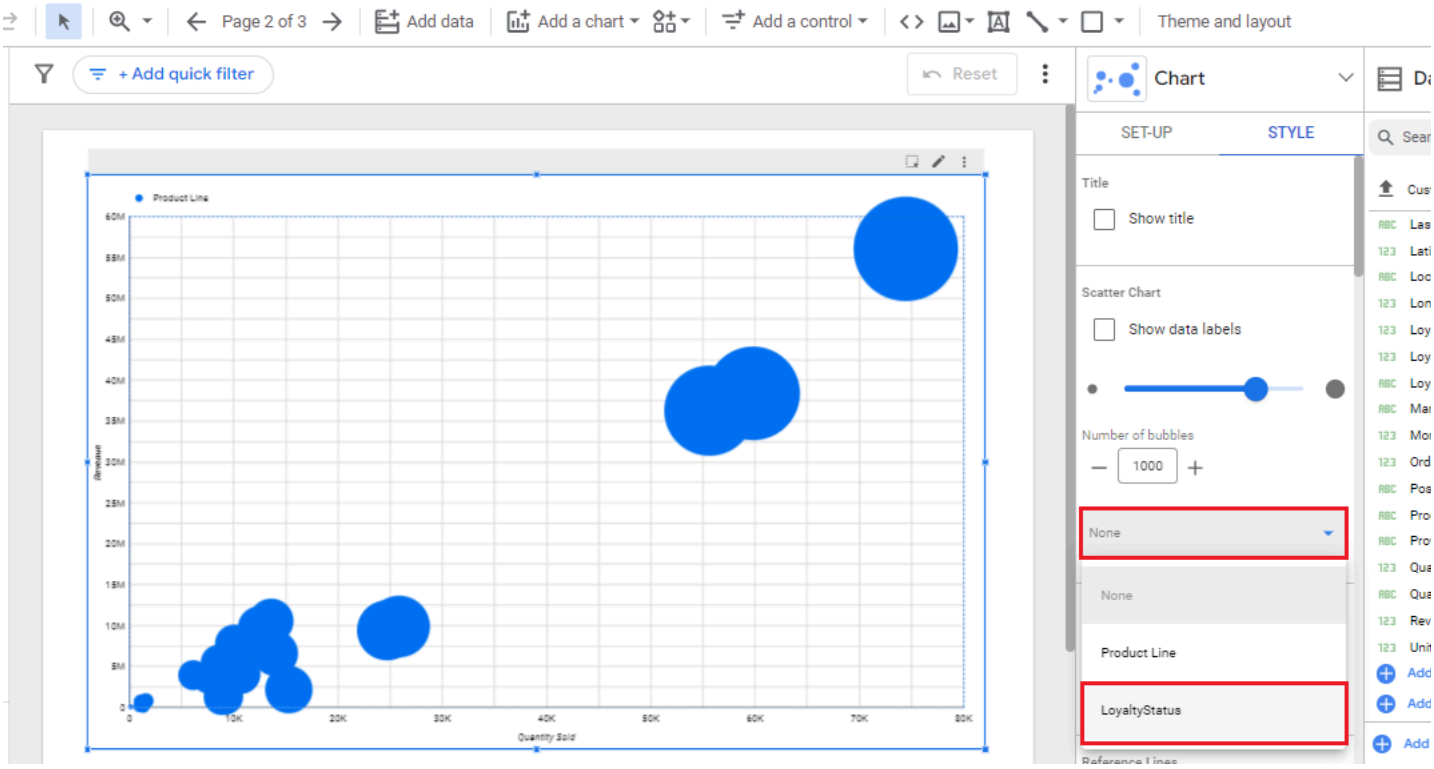
6. Drag and drop the **Quantity Sold** into the **Bubble Size metric** area, replacing 'Latitude'.



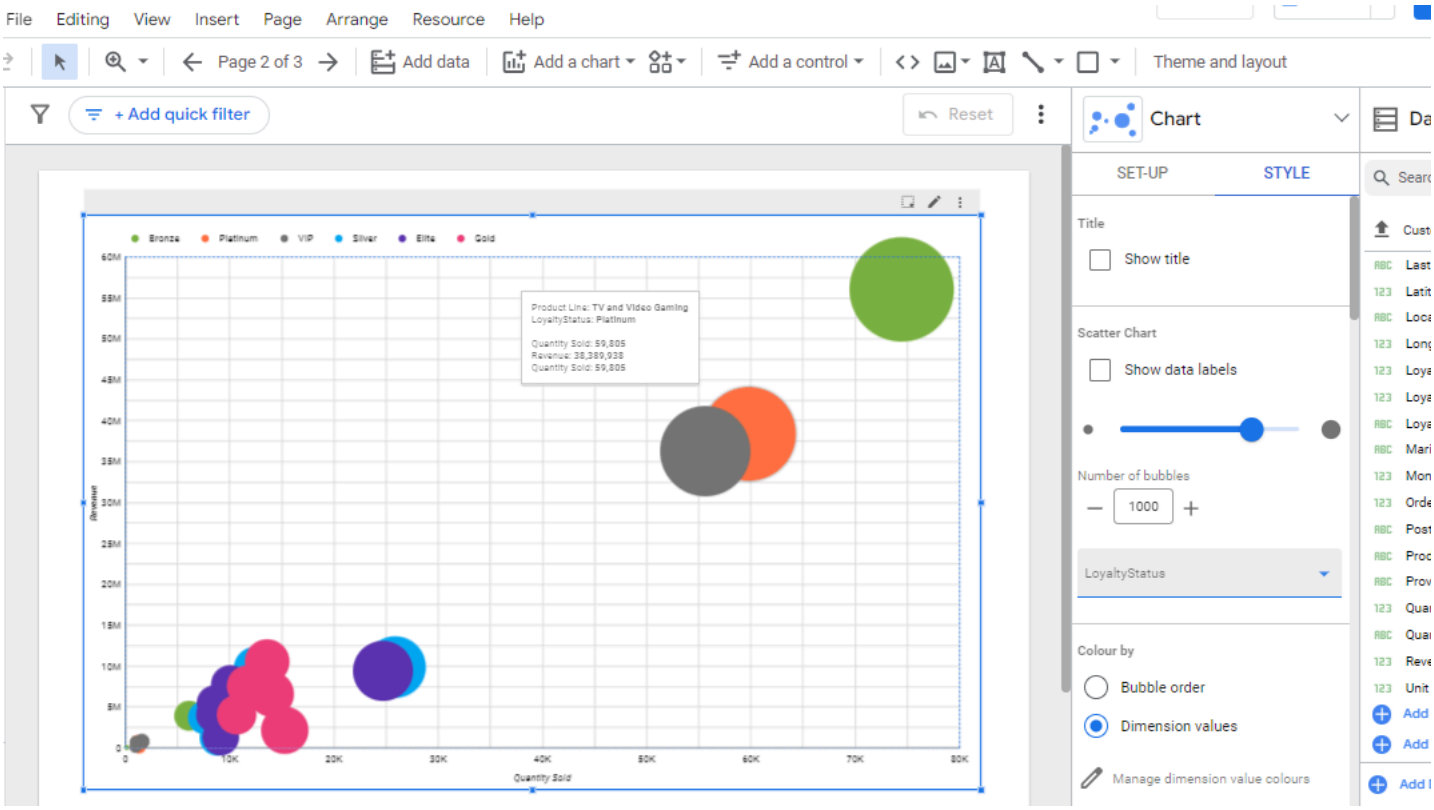
7. Now change the Metric X and Metric Y from **Record Count** and **Loyalty#** to **Quantity Sold** and **Revenue**.



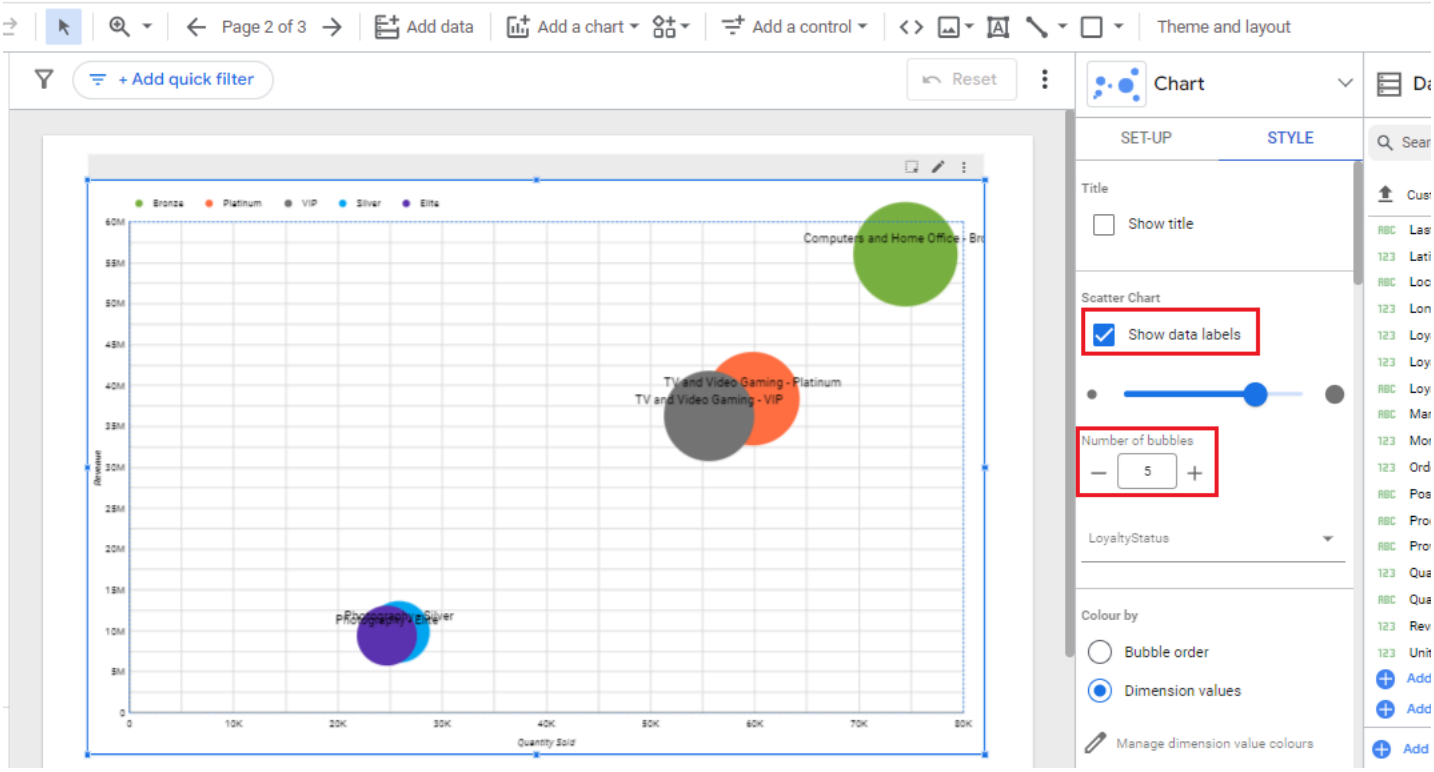
8. We will get the initial graph as shown below. Next, click the STYLE tab in the chart's Properties pane, then click on the drop down of **Bubble Color** field and select **Loyalty status**.



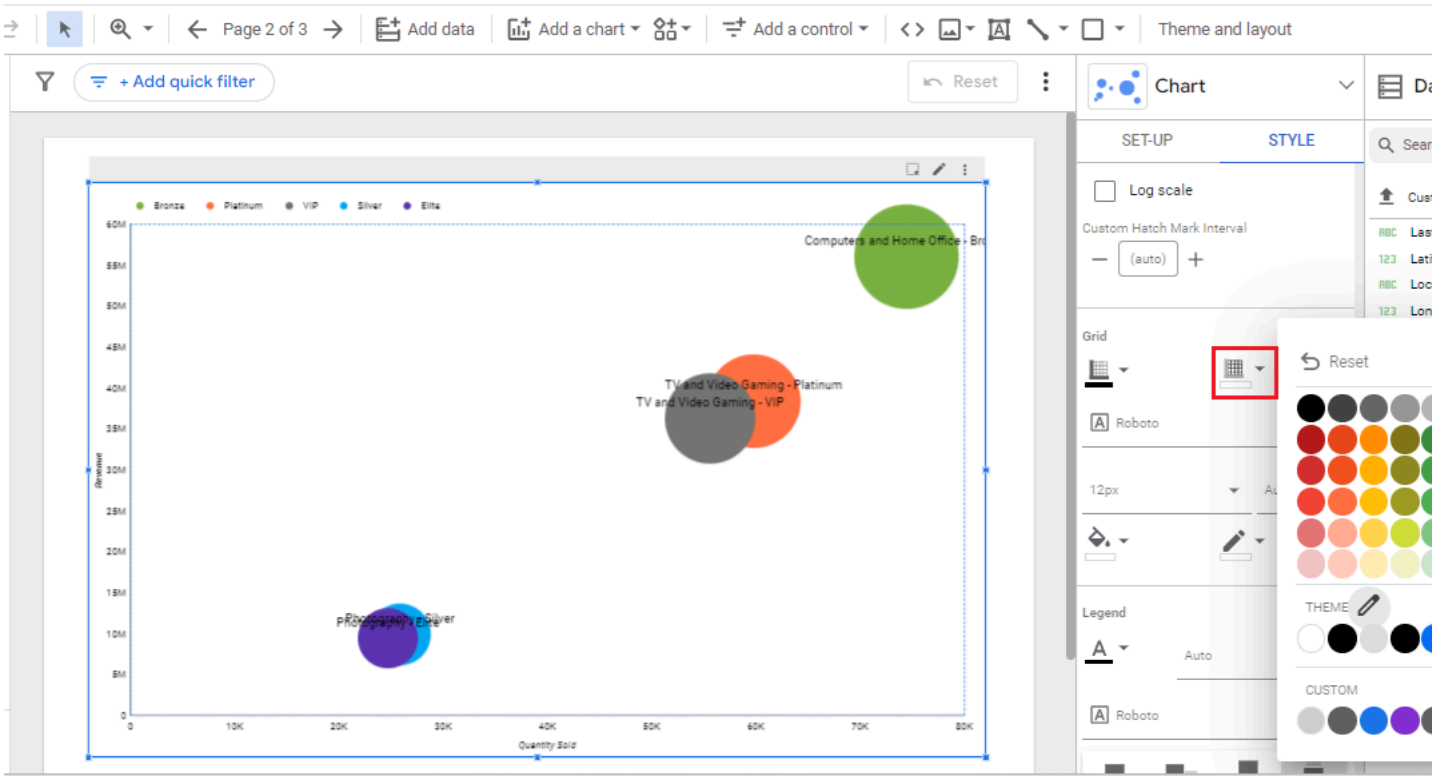
9. The graph will appear like the one below after setting the color. If you hover over the bubbles, you can see each bubble's dimensions and metrics in a dialog box, such as Loyalty status, Quantity sold, Revenue, and Product line.



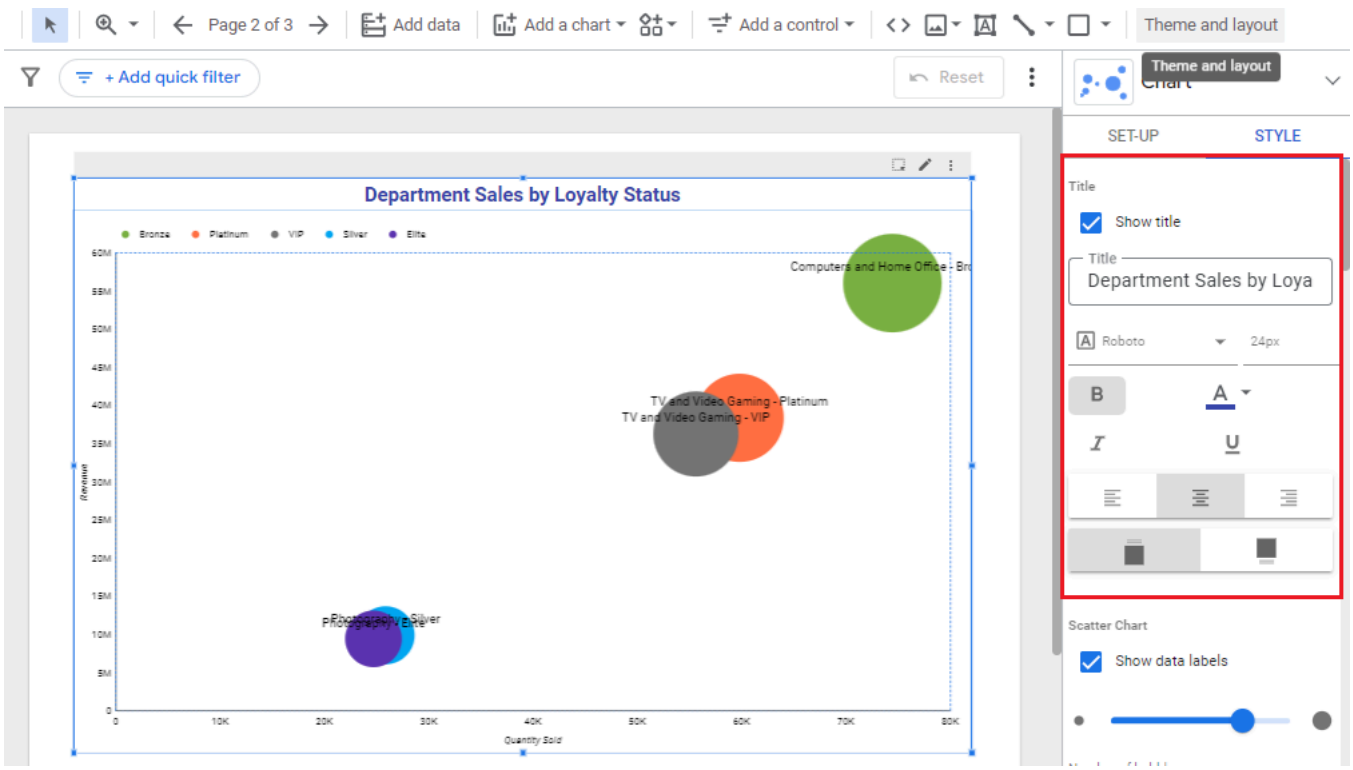
10. From the Style tab, set the **Number of bubbles** from 1000 to 5 and check the **Show data labels**.



11. Next, in the STYLE tab in the chart's Properties pane, go to the **Grid** settings, select the **Grid colour**, and check the **Transparent** box.



12. Check the Show Title box and type the title as **Department Sales by Loyalty Status**. Style the text as **24pt**, **bold**, and **dark blue**. Align it with the center of the chart visualization.



The scatter bubble graph, using dimensions of Product Line and Loyalty Status, and metrics of Quantity Sold (X-axis), Revenue (Y-axis), with bubble size representing Quantity Sold and bubble color indicating Loyalty Status, provides a comprehensive visualization of sales data. Each bubble corresponds to a product line, with its position on the X-axis showing the quantity sold and its position on the Y-axis showing the total revenue generated. The size of the bubble reflects the quantity sold, with larger bubbles indicating higher sales volumes. The color of the bubble represents the loyalty status of the customers, allowing for easy differentiation between various customer segments, such as Gold, Silver, or Bronze. This graph helps in understanding the performance of different product lines, the impact of customer loyalty on sales and revenue, and the relationship between the quantity sold and the revenue generated.

Congratulations! You have completed this hands-on lab and you are now ready for the next topic.

For more help, you can refer to the Tutorial on Looker Studio by Google

Author(s)

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