



(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**.

A screenshot of the Looker Studio interface. The top navigation bar includes File, Editing, View, Insert, Page, Arrange, Resource, Help, Reset, and Share buttons. Below the navigation is a toolbar with icons for back, forward, search, add page, add data, add chart (highlighted with a red box), add control, and theme/layout. A dropdown menu labeled 'Community visualisations and components' is open. On the right side of the screen, there is a preview area showing a bubble chart and a bar chart, with a 'Let's get started' message and instructions to drag fields from the Data Panel to the canvas or select a component to edit it.

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

Community visualisations BETA

Community visualisations are components built by third-party developers. Be sure to only add visualisations from trusted providers. [Learn more](#)

Featured

- Gauge By Google
- Radar Chart By ClickInsight
- Metric Funnel By PowerMyAnalytics
- Sunburst Chart By Supermetrics

+ Explore more

Let's get started

Drag a field from the Data Panel to the canvas to add a new chart or select a component on the report canvas to edit it.

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.

Untitled Report

File Editing View Insert Page Arrange Resource Help

Add page Add data Add a chart Add a control Theme and layout

+ Add quick filter

Community Gallery BETA

Vega/Vega-Lite By Jerry Chen

A Data Studio Community Viz using Vega and Vega-lite.

Gauge By Google

A gauge with a dial.

Sunburst By Yulan Lin

Sunburst chart built with d3.js.

Heatmap By Yulan Lin

Heatmap built with d3.js.

Sankey By Yulan Lin

Sankey visualization built with d3.js.

Chord Diagram By Email Meter

A Chord Diagram, great for visualizing relationships between two dimensions.

Metric Funnel By PowerMyAnalytics

Easy to configure funnel that uses up to 8 metrics.

Candlestick By Google

A candlestick chart. Shows opening and closing values and total variance.

Waterfall

CSV Filter Control

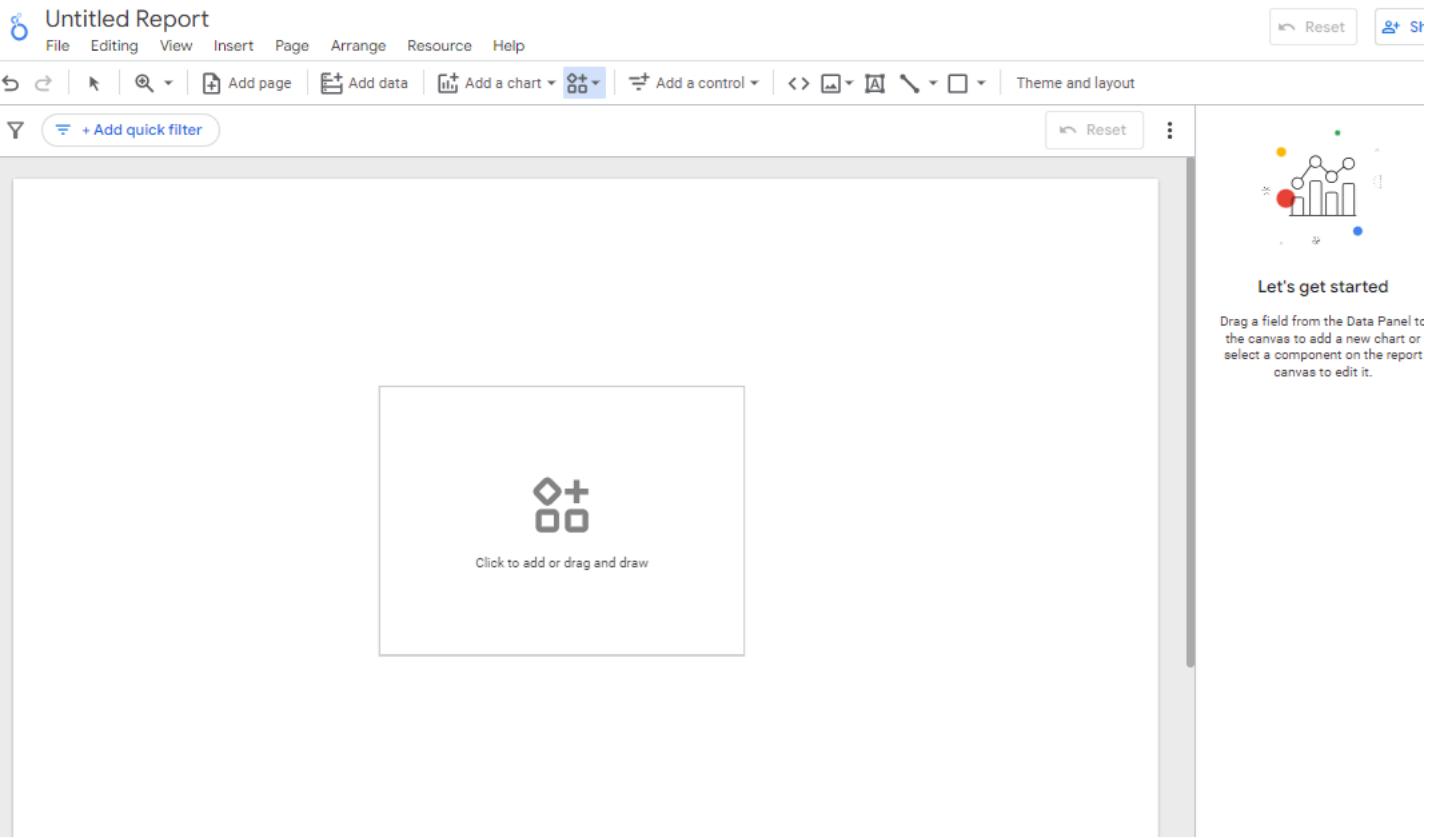
Range Slider

Histogram

Let's get started

Drag a field from the Data Panel to the canvas to add a new chart or select a component on the report canvas to edit it.

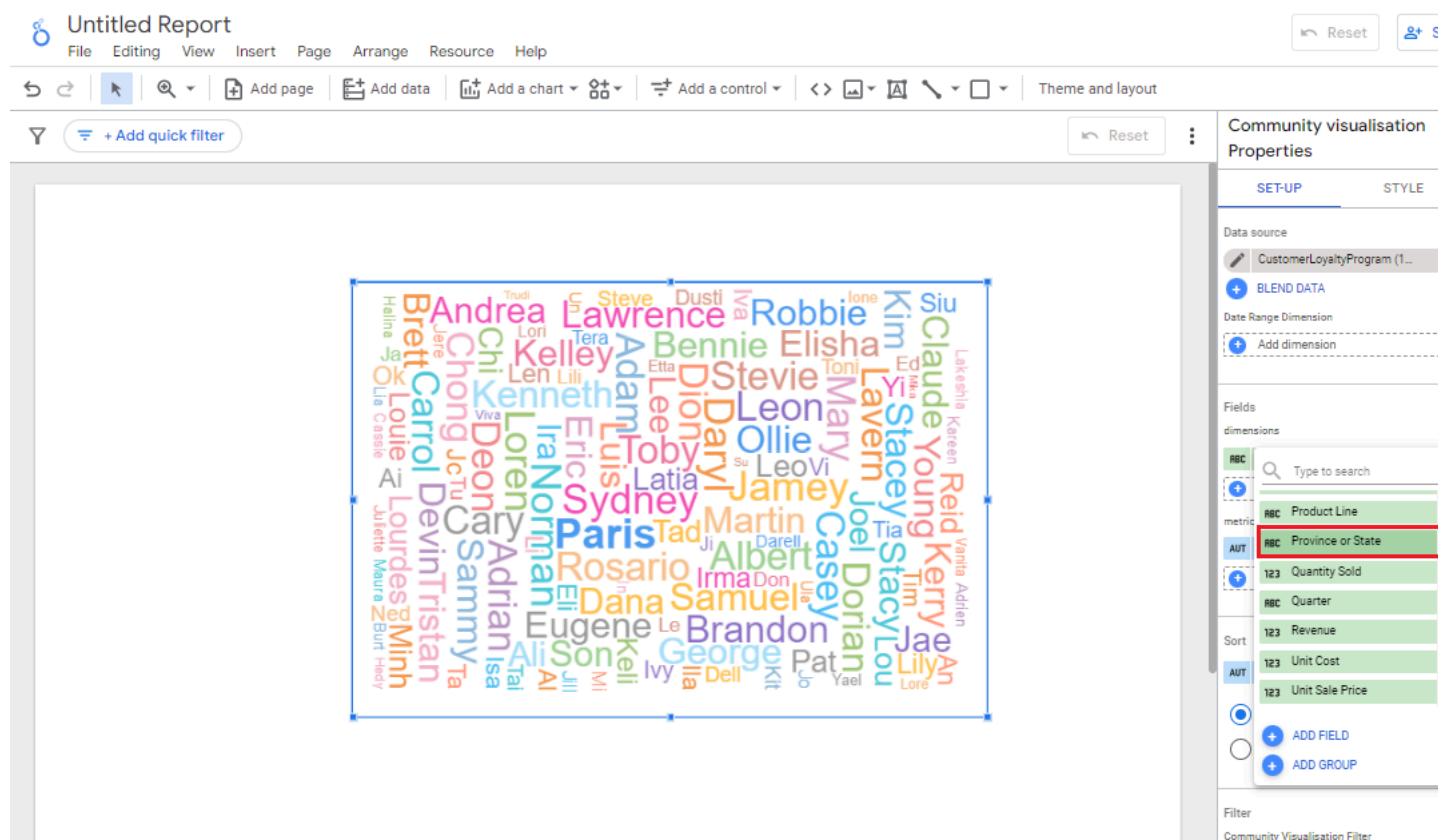
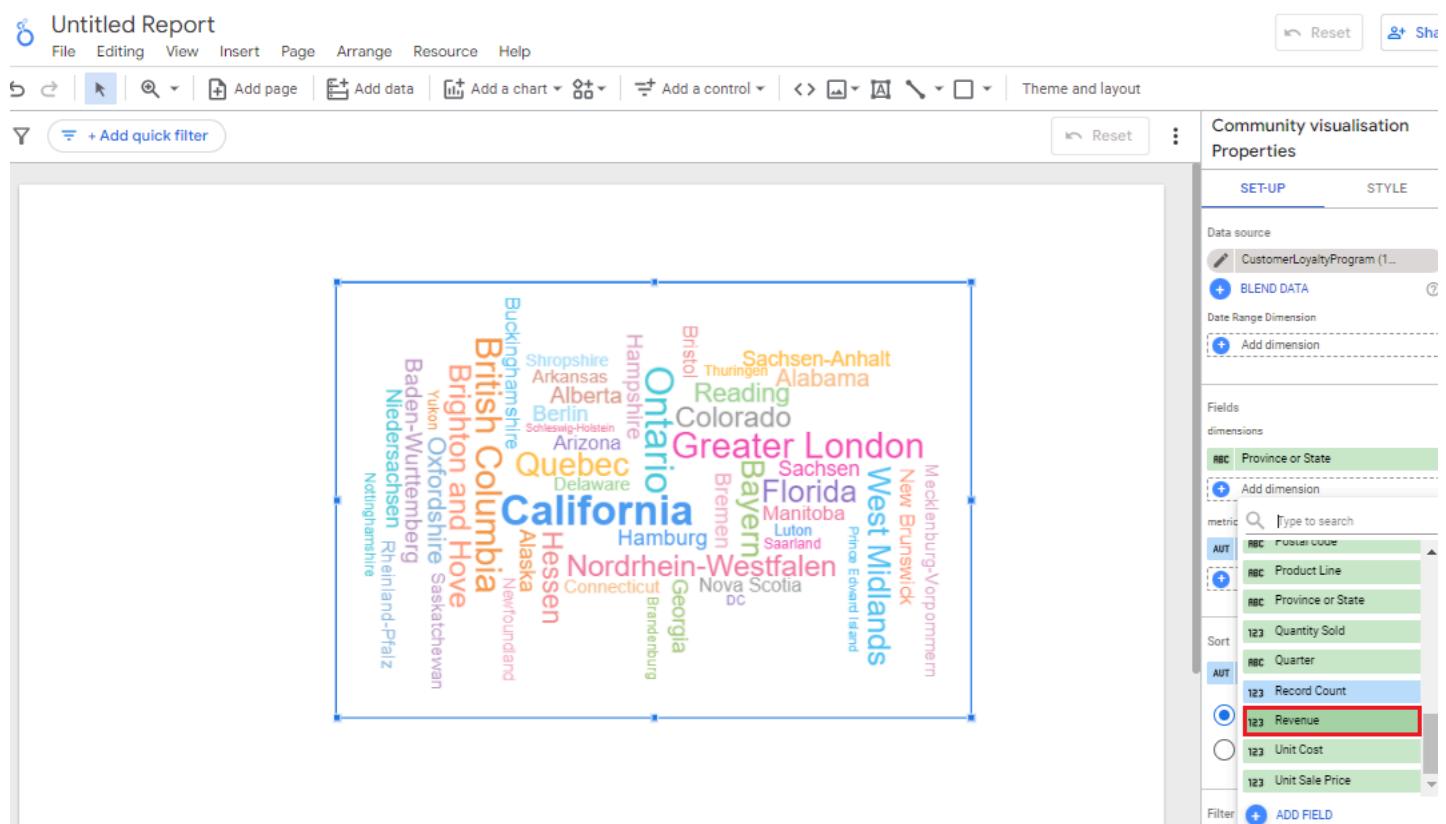
4. After clicking on the **Vega/Vega-Lite**, a blank graph will appear on the canvas with your cursor. Click on the canvas to finalize and display the blank graph.



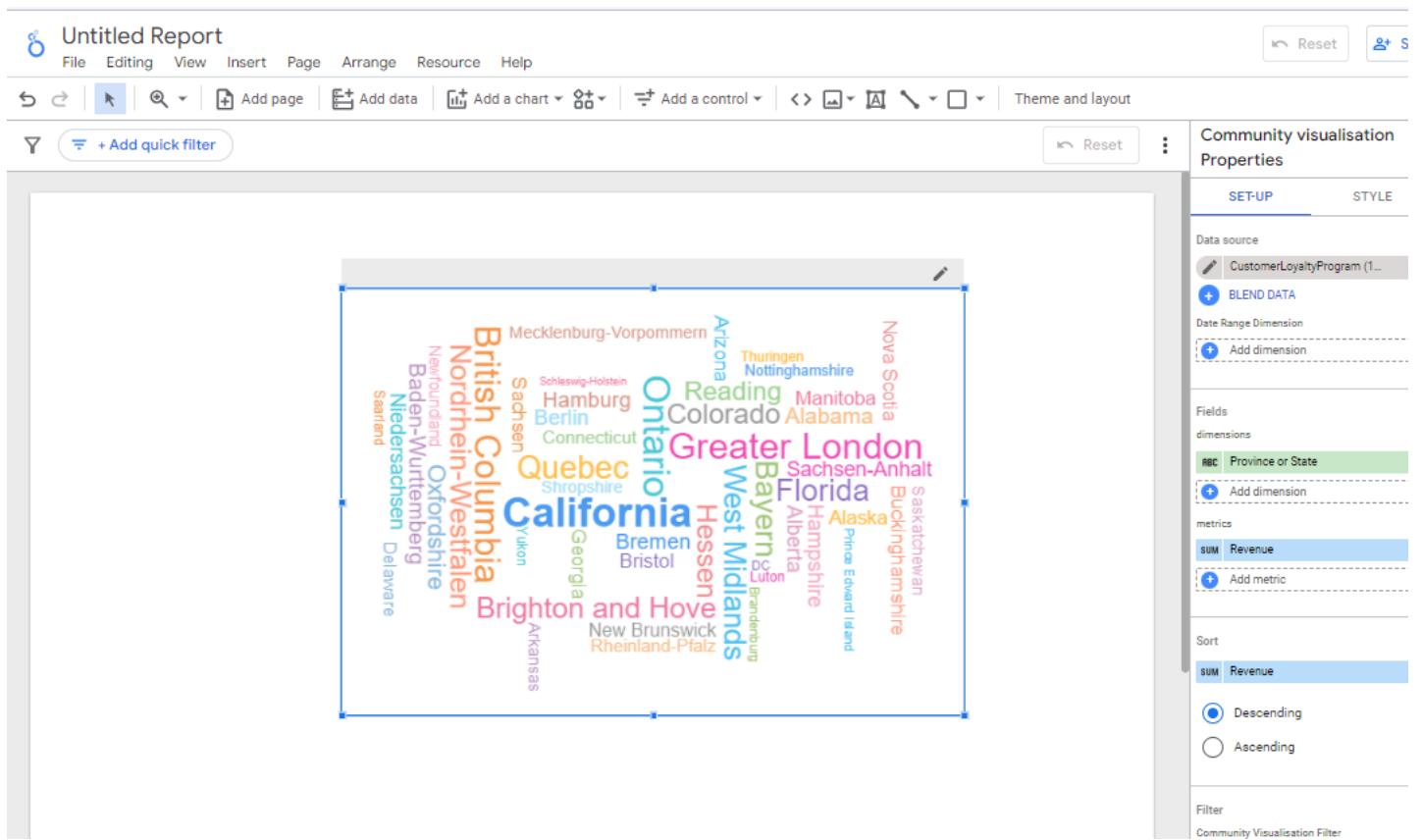
5. By default, it will appear as shown in the screenshot below. We will proceed to adjust the dimensions and metrics.

A screenshot of the Data Studio interface showing a word cloud visualization on the canvas. The words are colored and sized based on their frequency. To the right, the 'Community visualisation Properties' panel is open, showing the 'SET-UP' tab selected. Under 'Data source', 'CustomerLoyaltyProgram (1...)' is listed. Under 'Dimensions', 'First Name' is selected. Under 'Metrics', 'Record Count' is selected. Under 'Sort', 'Record Count' is set to 'Descending'. The 'STYLE' tab is also visible.

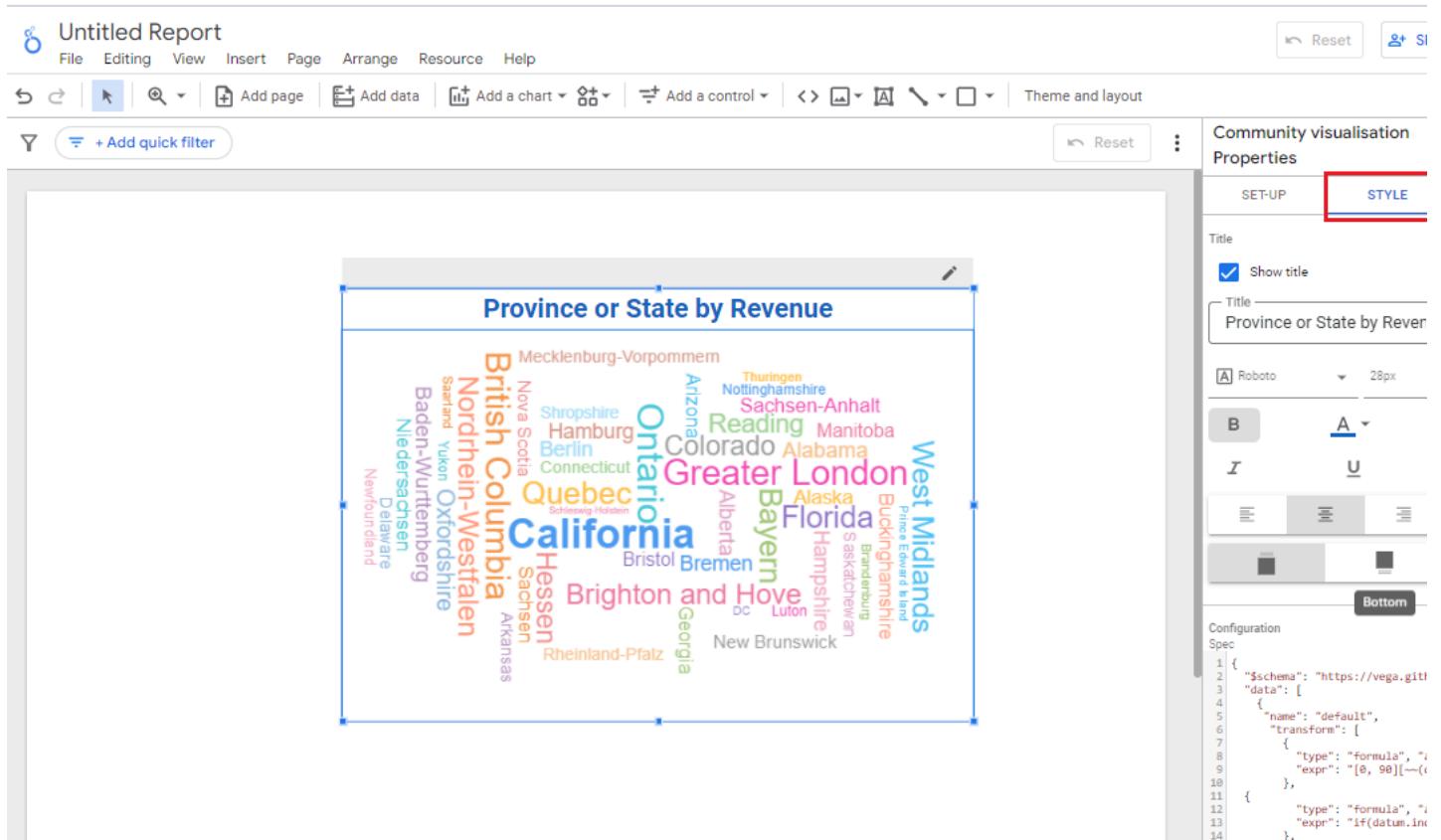
6. Change the dimension from First Name to Province or State and metrics from Record count to Revenue.

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.



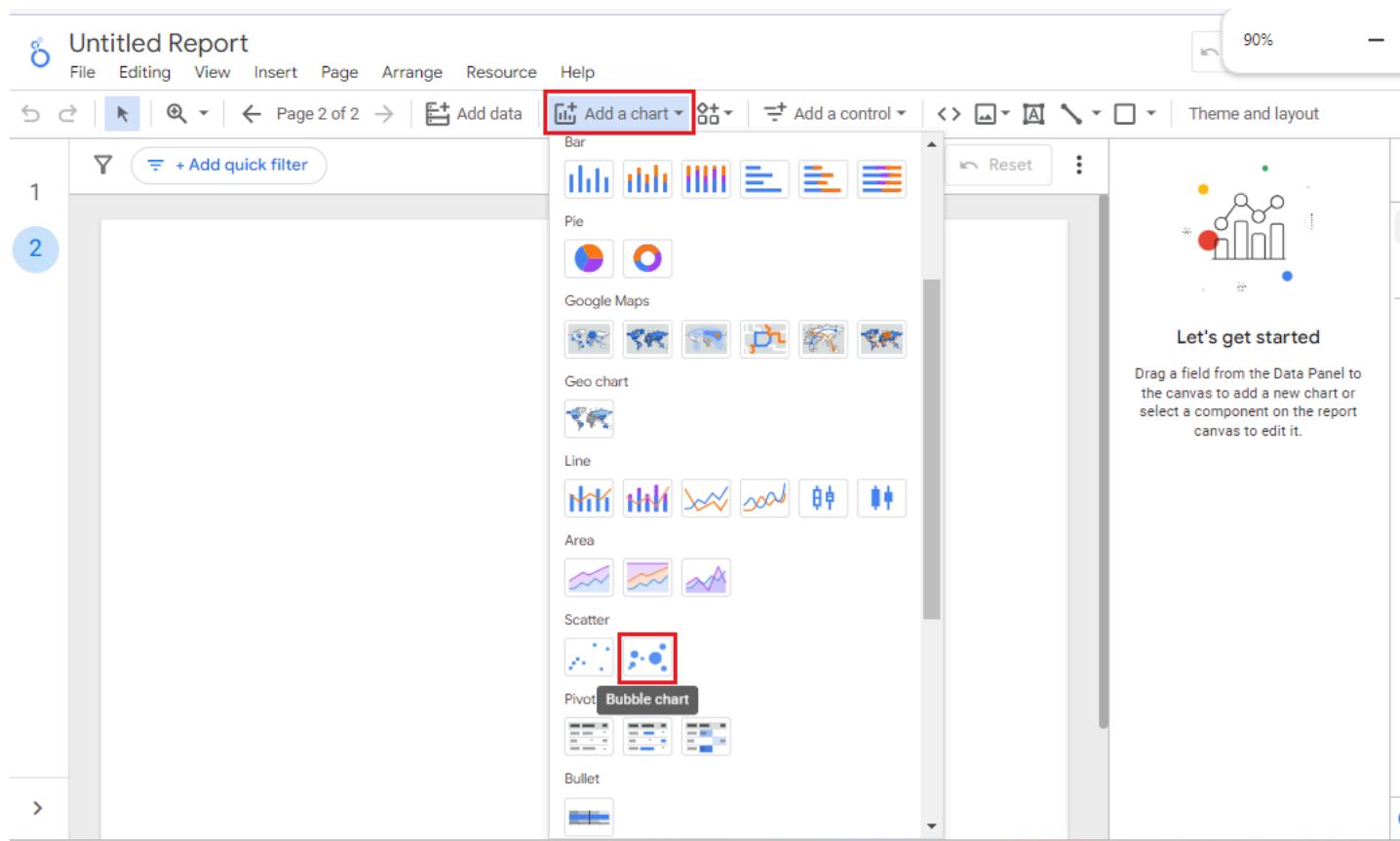
A above word cloud of **Province or State by Revenue** visualizes the relationship between different provinces or states and their corresponding revenue levels. In this visualization, the size of each province or state name within the cloud is proportional to its revenue. Typically, larger font sizes 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**.

This screenshot shows the 'Chart' setup pane. The 'SET-UP' tab is selected. In the 'Dimension' section, 'Product Line' is highlighted with a green background. An arrow points from the 'Add dimension' button in the 'SET-UP' tab towards the 'Product Line' entry in the data pane. The 'Data' pane on the right lists various fields: Last Name, Latitude, Location Code, Longitude, Loyalty Count, Loyalty#, LoyaltyStatus, Marital Status, MonthsAsMember, Order Year, Postal code, Product Line, Province or State, Quantity Sold, Quarter, Revenue, Unit Cost, and Record Count. The 'Product Line' field is also highlighted with a green background. The 'Metric X' section shows 'Record Count' as the metric. The 'Metric Y' section shows 'Loyalty#' as the metric. The 'Bubble Size Metric' section shows 'Latitude' as the metric. The 'Sort' section shows 'Record Count' as the sort metric. The 'Style' tab is also visible in the top left of the setup pane.

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

Chart

SET-UP

Dimension

- RBC Product Line
- RBC LoyaltyStatus**

Metric X

- AUT Record Count

Metric Y

- SUM Loyalty#

Bubble Size Metric

- SUM Latitude

Metric sliders

Sort

Data

Search: CustomerLoyaltyProgram (19).csv

- RBC Last Name
- 123 Latitude
- RBC Location Code
- 123 Longitude
- 123 Loyalty Count
- 123 Loyalty#
- RBC LoyaltyStatus**
- 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

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

Theme and layout

Pause updates

Chart

SET-UP

Dimension

- RBC Product Line
- RBC LoyaltyStatus
- + Add dimension

Drill down

Metric X

- AUT Record Count

Metric Y

- SUM Loyalty#

Bubble Size Metric

- SUM 123 Quantity Sold**

Metric sliders

Sort

Data

Search: CustomerLoyaltyProgram (19).csv

- RBC Last Name
- 123 Latitude
- RBC Location Code
- 123 Longitude
- 123 Loyalty Count
- 123 Loyalty#
- RBC LoyaltyStatus
- 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

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

Chart

SET-UP STYLE

Dimension

- RBC Product Line
- RBC LoyaltyStatus

Metric X

SUM Quantity Sold

Metric Y

SUM Revenue

Bubble Size Metric

SUM Quantity Sold

Metric sliders

Sort

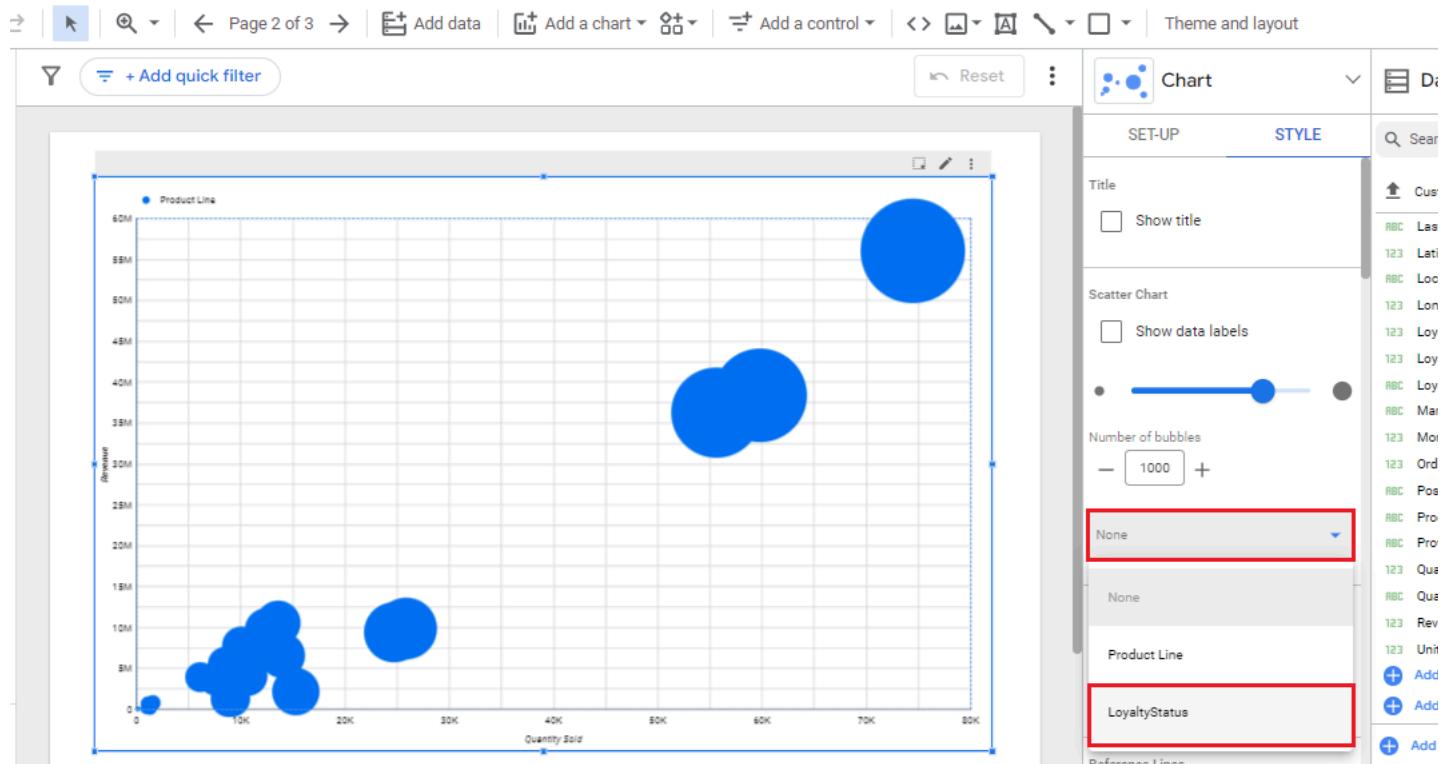
Data

Search

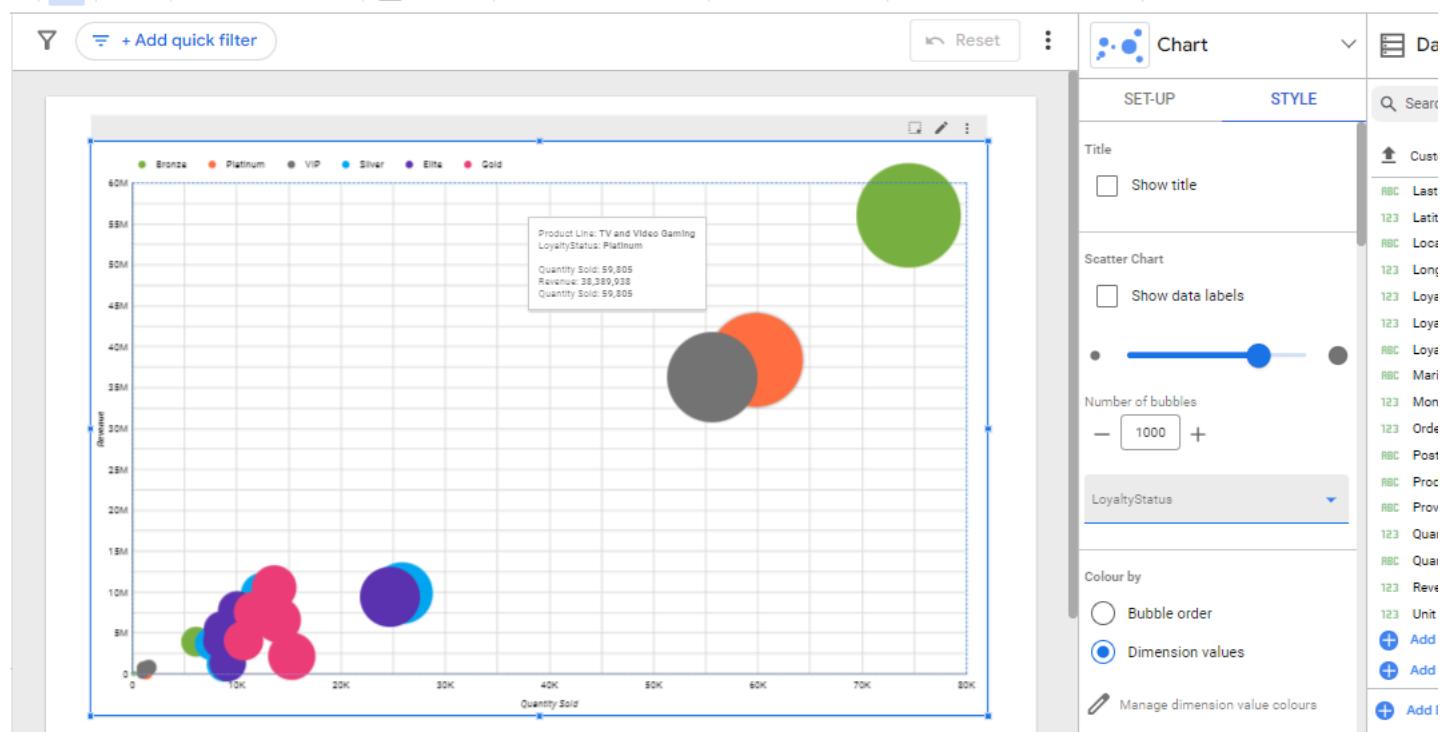
CustomerLoyaltyProgram (19).csv

- RBC Last Name
- 123 Latitude
- RBC Location Code
- 123 Longitude
- 123 Loyalty Count
- 123 Loyalty#
- RBC LoyaltyStatus
- 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

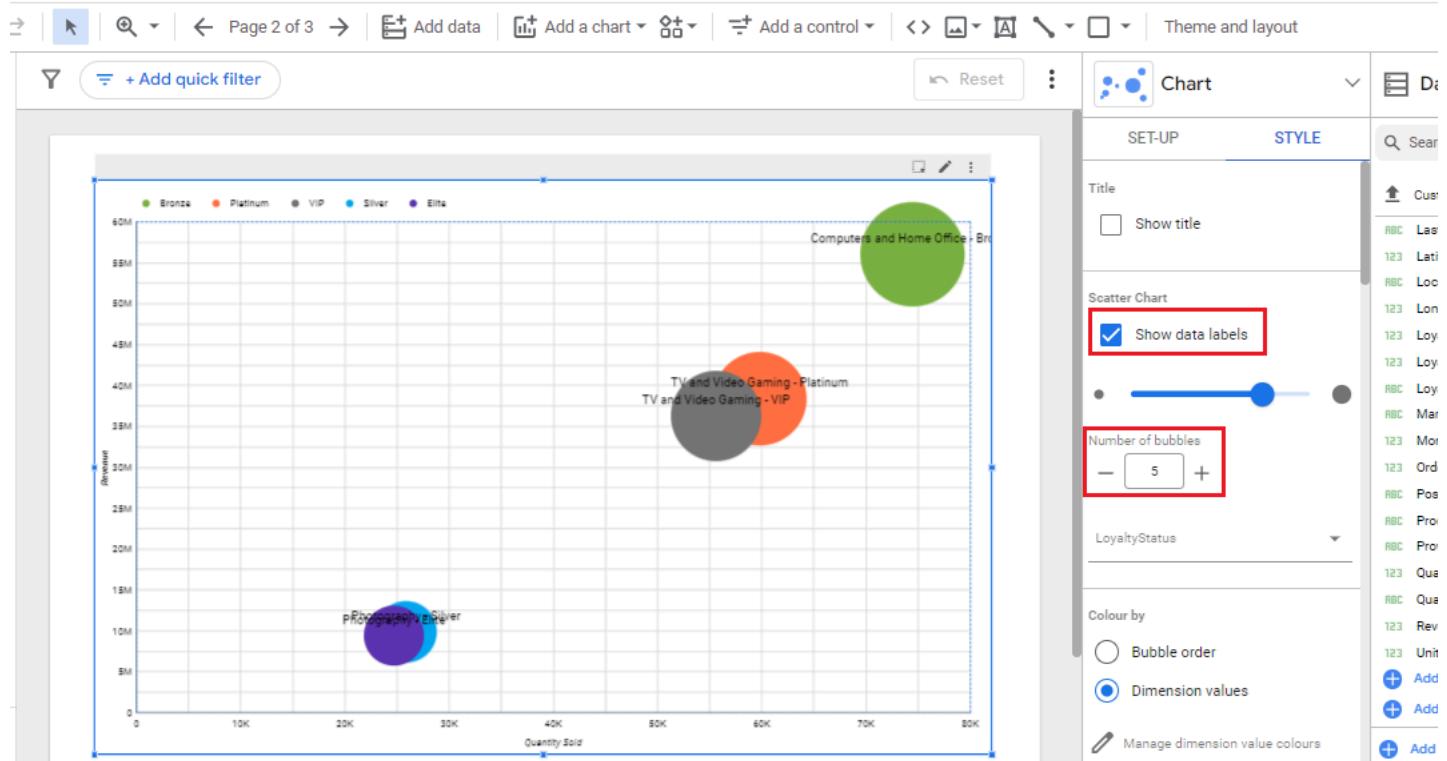
8. We will get the initial graph as shown below. Next, click the STYLE tab in the chart's Properties pane, then click on the drop down of **Bubble Color** field and select **Loyalty status**.



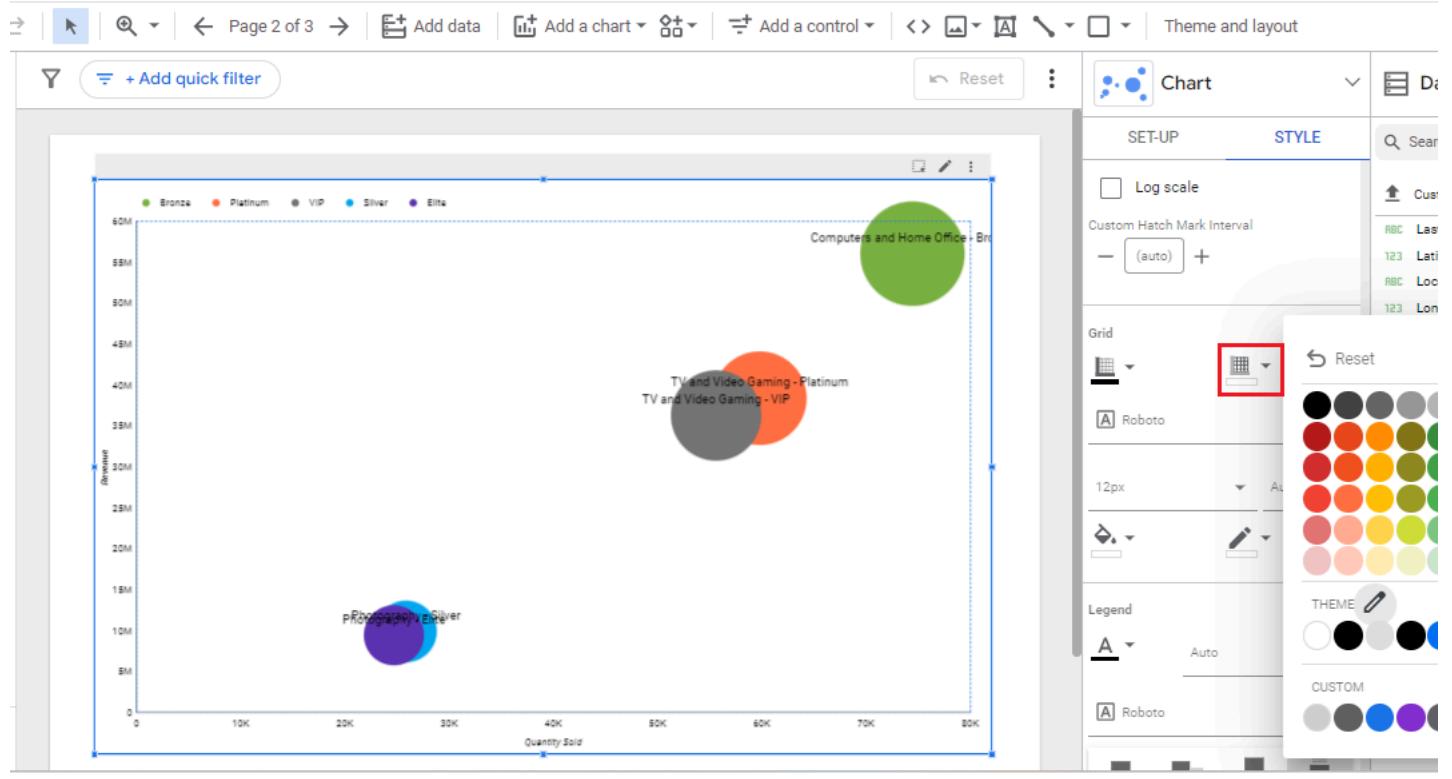
9. The graph will appear like the one below after setting the color. If you hover over the bubbles, you can see each bubble's dimensions and metrics in a dialog box, such as Loyalty status, Quantity sold, Revenue, and Product line.



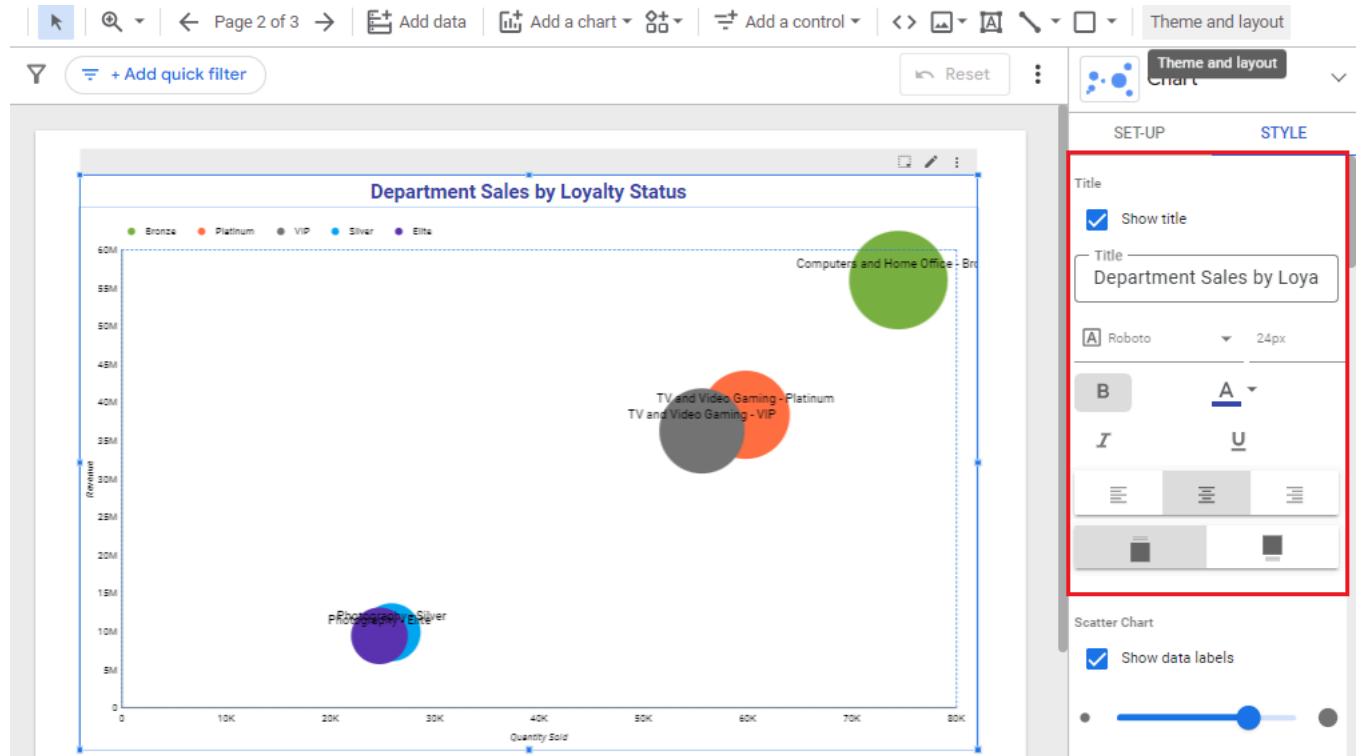
10. From the Style tab, set the **Number of bubbles** from 1000 to 5 and check the **Show data labels**.



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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