

India's First Paid Internship Programme



LEARN TABLEAU

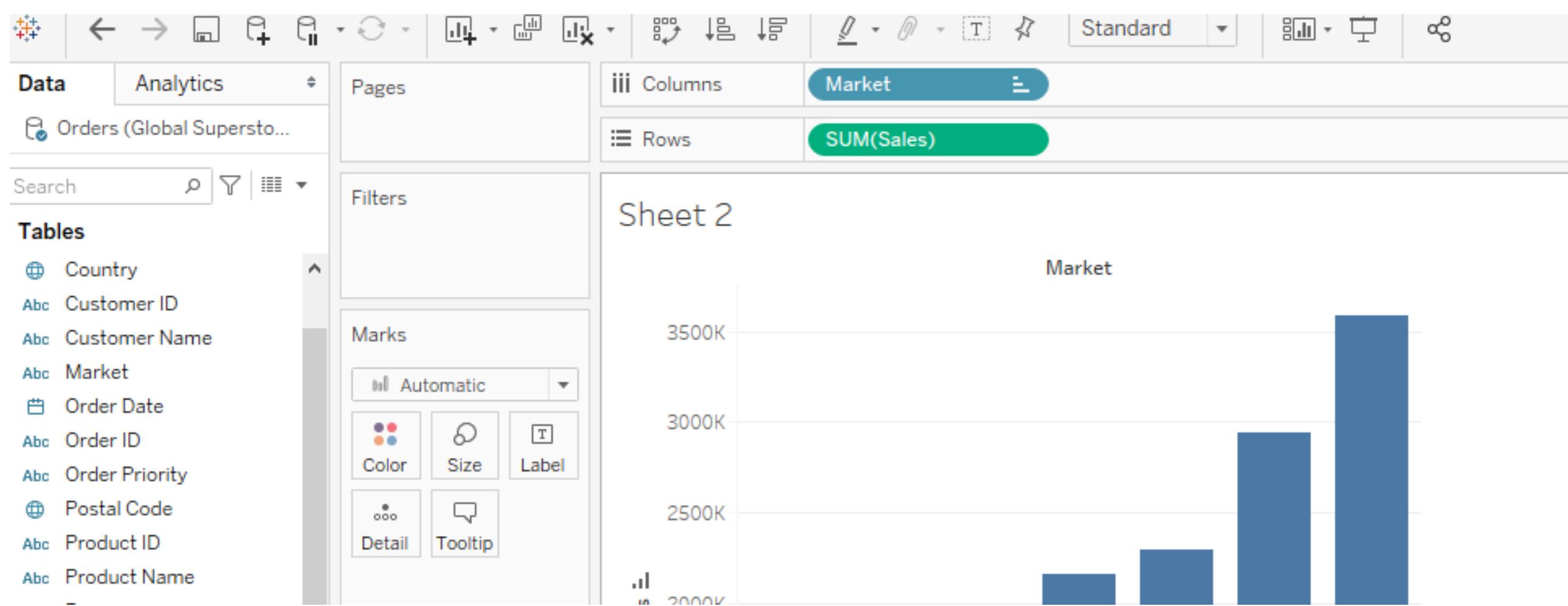
Acquire proficiency in Tableau and secure an excellent employment opportunity.



@viharatech

www.viharatech.com

Introduction to Tableau





Project for the Day

- Create a simple bar chart to visualize data from the sample dataset.

? Practice Questions

- Download and install Tableau Public or Tableau Desktop (if available).
- Create your first Tableau workbook and connect to a sample dataset.

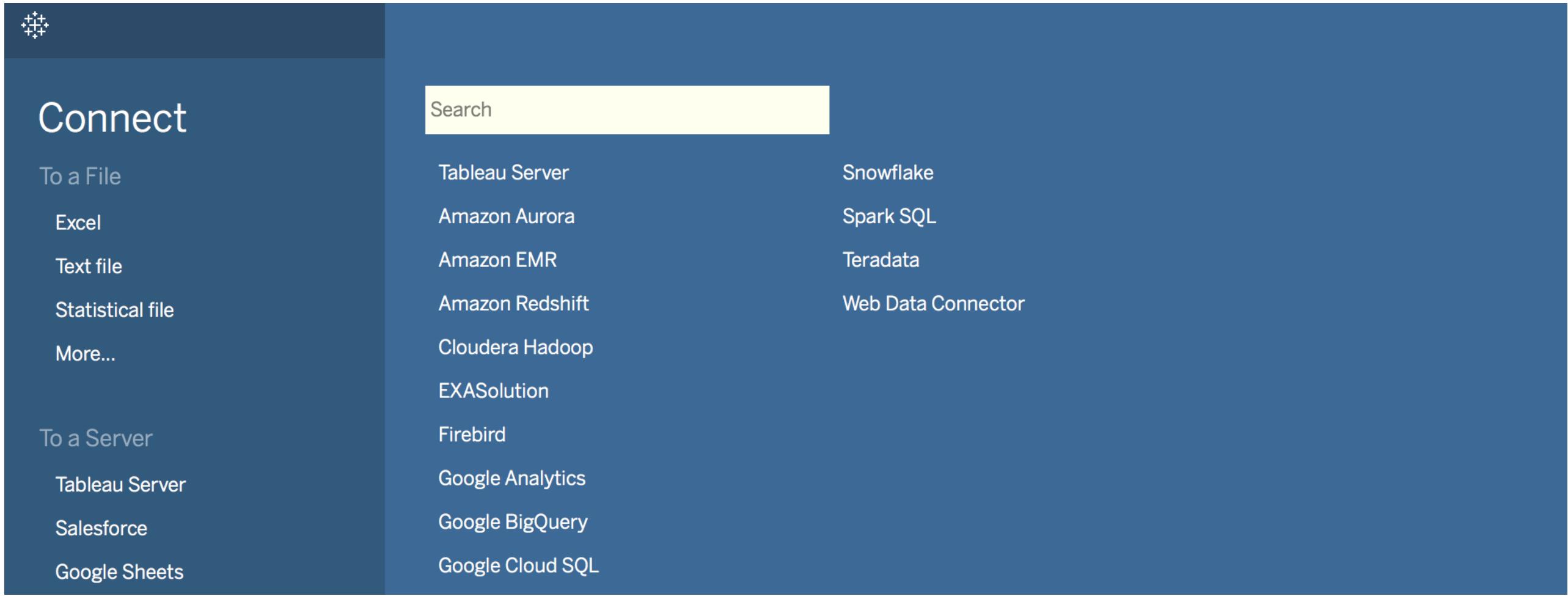


Datasets

- Sample Superstore Sales dataset: This dataset contains sales data and is commonly used for Tableau practice.



Understanding Data Connections



A screenshot of the Tableau interface showing the 'Connect' pane. On the left, there are two main sections: 'To a File' and 'To a Server'. Under 'To a File', options include 'Excel', 'Text file', 'Statistical file', and 'More...'. Under 'To a Server', options include 'Tableau Server', 'Salesforce', and 'Google Sheets'. To the right of these sections is a search bar labeled 'Search' and a list of various data sources:

| Category | Source |
|--------------------|------------------|
| To a File | Tableau Server |
| | Amazon Aurora |
| | Amazon EMR |
| | Amazon Redshift |
| | Cloudera Hadoop |
| | EXASolution |
| To a Server | Firebird |
| | Google Analytics |
| | Google BigQuery |
| | Google Cloud SQL |
| Snowflake | |
| Spark SQL | |
| Teradata | |
| Web Data Connector | |



Project for the Day

- Connect to an Excel dataset containing sales data.
- Perform basic data cleaning tasks like filtering and renaming columns.



Practice Questions

- Connect to different data sources such as Excel, CSV, or a database.
- Practice data source editing and data cleaning.



Datasets

- Iris Dataset: A classic dataset in machine learning, it contains measurements of iris flowers.

Basic Data Visualization





Project for the Day

- Use your sales dataset from Day 2.
- Create a bar chart to visualize product-wise sales.
- Customize the chart with labels and colors for better presentation.



Practice Questions

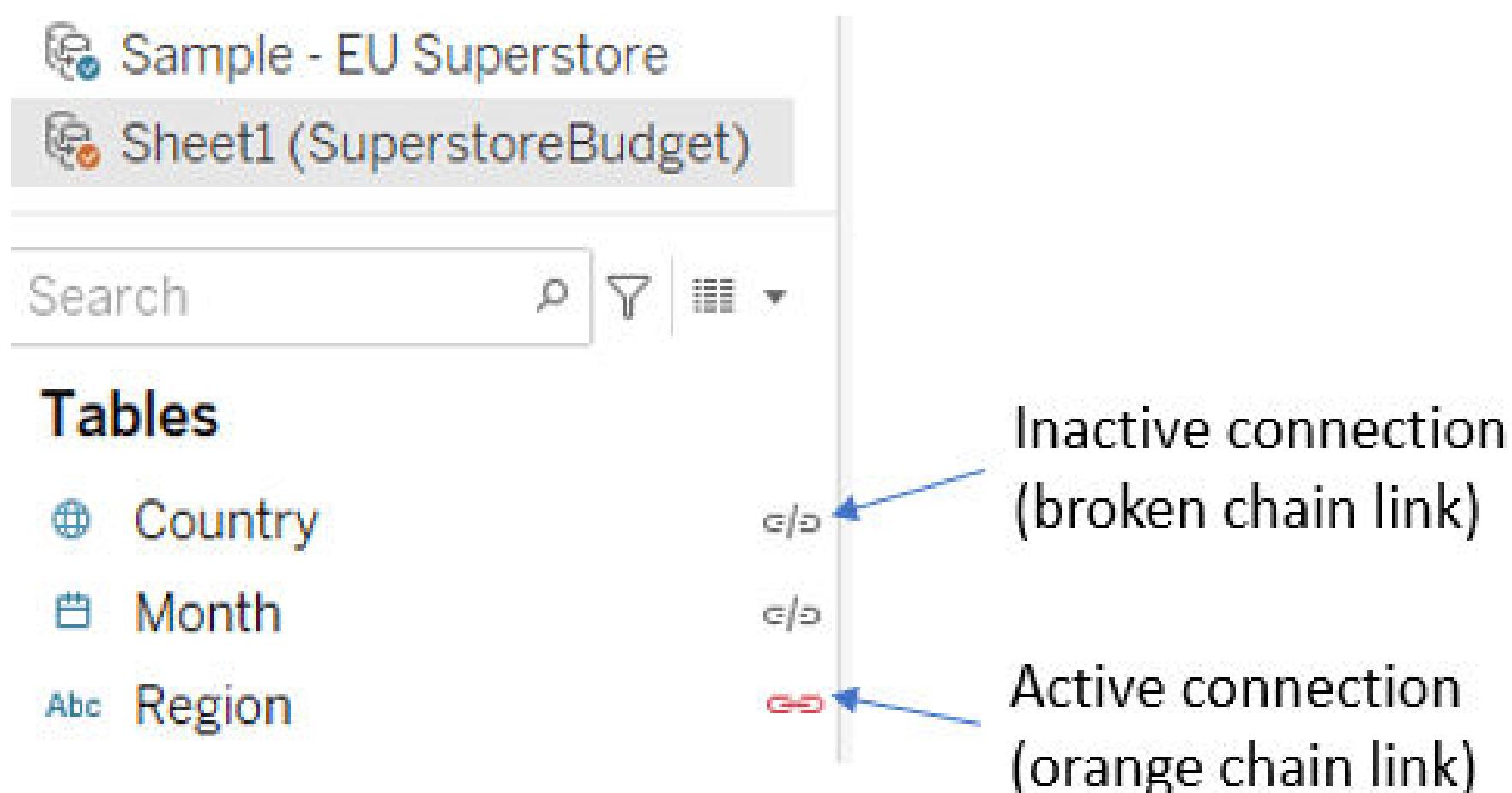
- Create a bar chart, line chart, and scatter plot.
- Customize visuals by adding labels, colors, and tooltips.



Datasets

- Global Superstore: Another retail dataset, useful for creating basic visualizations.

Data Blending



Resources for Learning

- Tableau Online Help: [Combine Your Data](#)
- YouTube Tutorial: [Data Blending in Tableau](#)



Project for the Day

- Connect to two separate datasets (e.g., sales and customer data).
- Blend the data to create a unified view and build visualizations.

? Practice Questions

- Connect to multiple data sources and blend data.
- Understand relationships and data blending options.

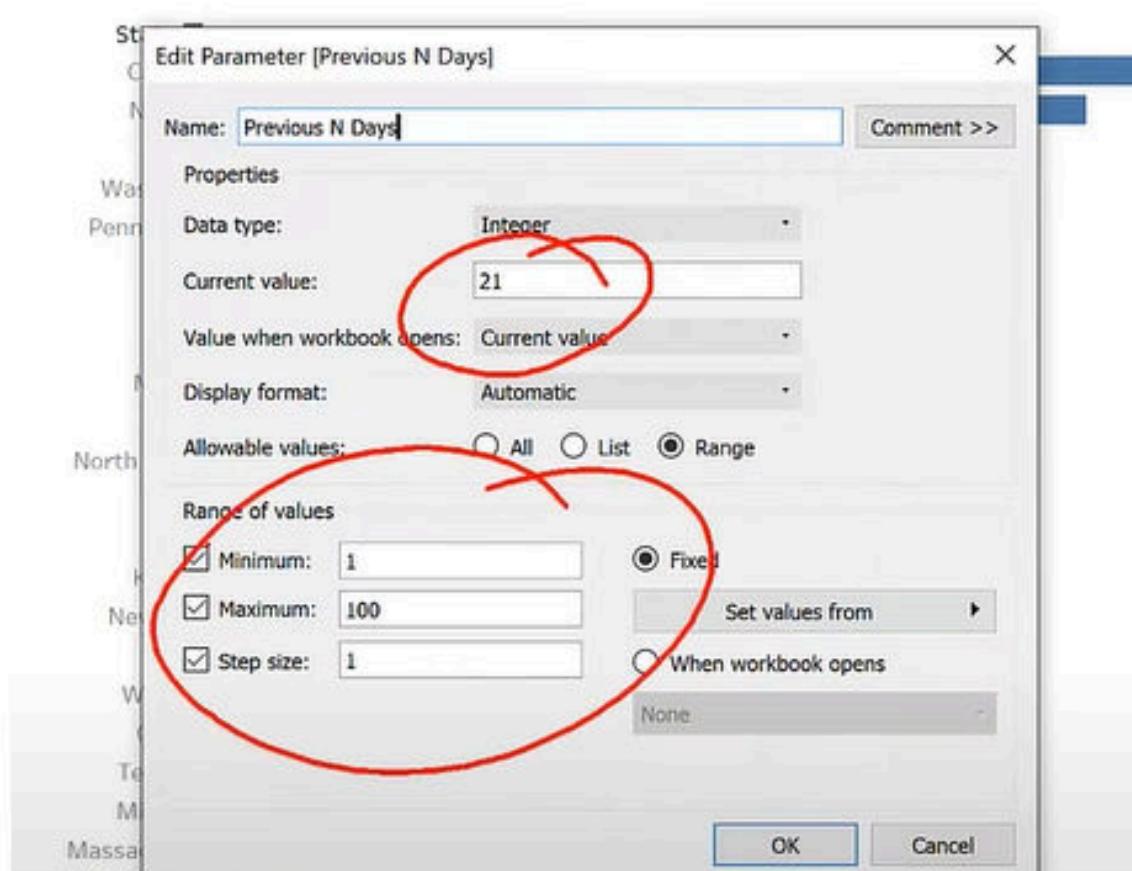


Datasets

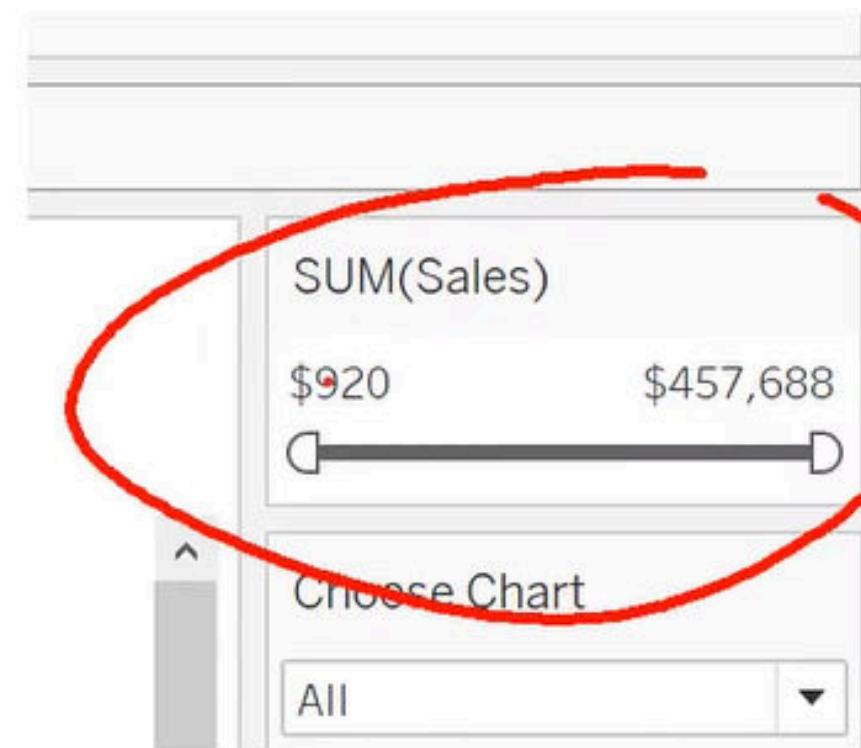
- Sales and Customer Data: A sample dataset containing sales and customer information, great for data blending practice.

Filters and Parameters

Parameters



Filters





Project for the Day

- Apply filters to your visualizations to enable data exploration.
- Create a parameter to allow users to switch between different data views.



Practice Questions

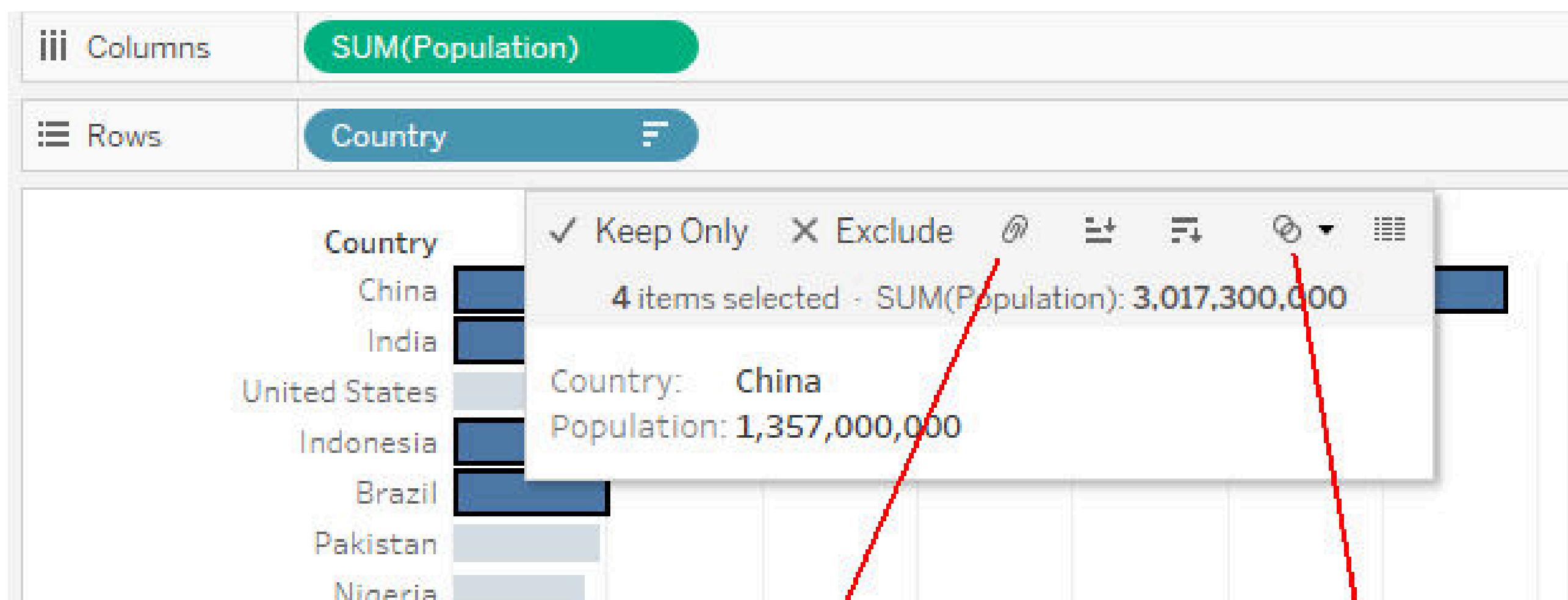
- Create filters to interactively explore data.
- Use parameters for dynamic data selection.



Datasets

- Sample Coffee Chain: A dataset related to a coffee chain business, suitable for practicing filters and parameters.

Groups and Sets



Resources for Learning

- Tableau Online Help: [Combine Members into a Group](#)
- Tableau Online Help: [Create Sets](#)
- YouTube Tutorial: [Groups and Sets in Tableau](#)



Project for the Day

- Use your sales dataset.
- Create a group to classify products into different categories.
- Build a set to identify high-value customers based on sales.



Practice Questions

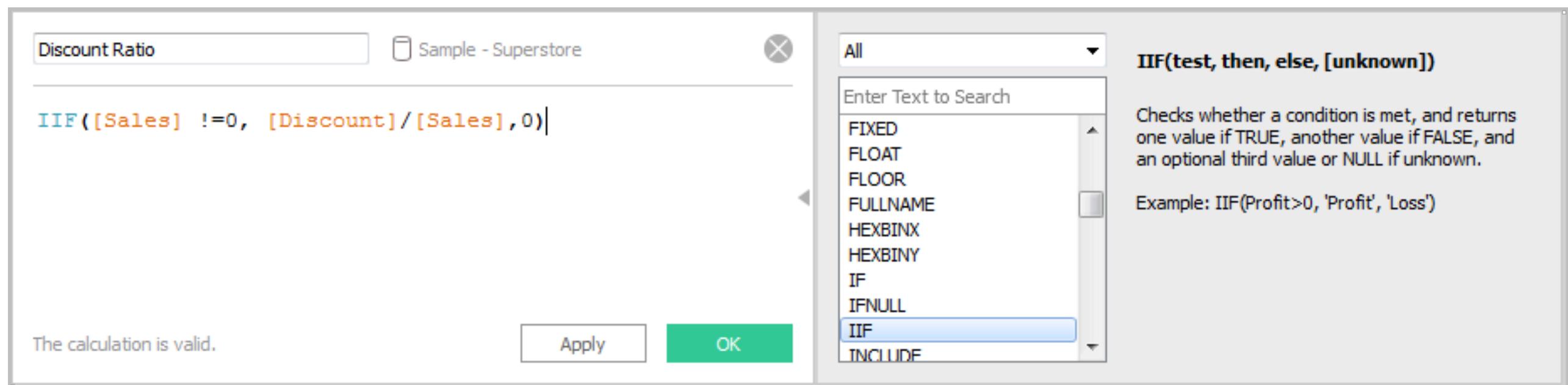
- Create groups to categorize data points.
- Build sets to define custom subsets of data.



Datasets

- Sample EU Superstore: A dataset featuring sales data across European countries.

Calculated Fields (Calculated Columns and Measures)



Resources for Learning

- Tableau Online Help: [Create Calculated Fields](#)
- YouTube Tutorial: [Calculated Fields in Tableau](#)



Project for the Day

- Use your sales dataset.
- Create a calculated field to calculate the profit margin for each sale.
- Build a measure to calculate the total profit for the entire dataset.



Practice Questions

- Write calculated fields to derive new data.
- Differentiate between calculated columns and measures.



Datasets

- Sample World Indicators: A dataset with various world indicators, useful for calculated field practice.

Advanced Chart Types





Project for the Day

- Create a treemap visualization to represent hierarchical data.
- Build a dual-axis chart that combines a line chart with a bar chart to compare two measures.



Practice Questions

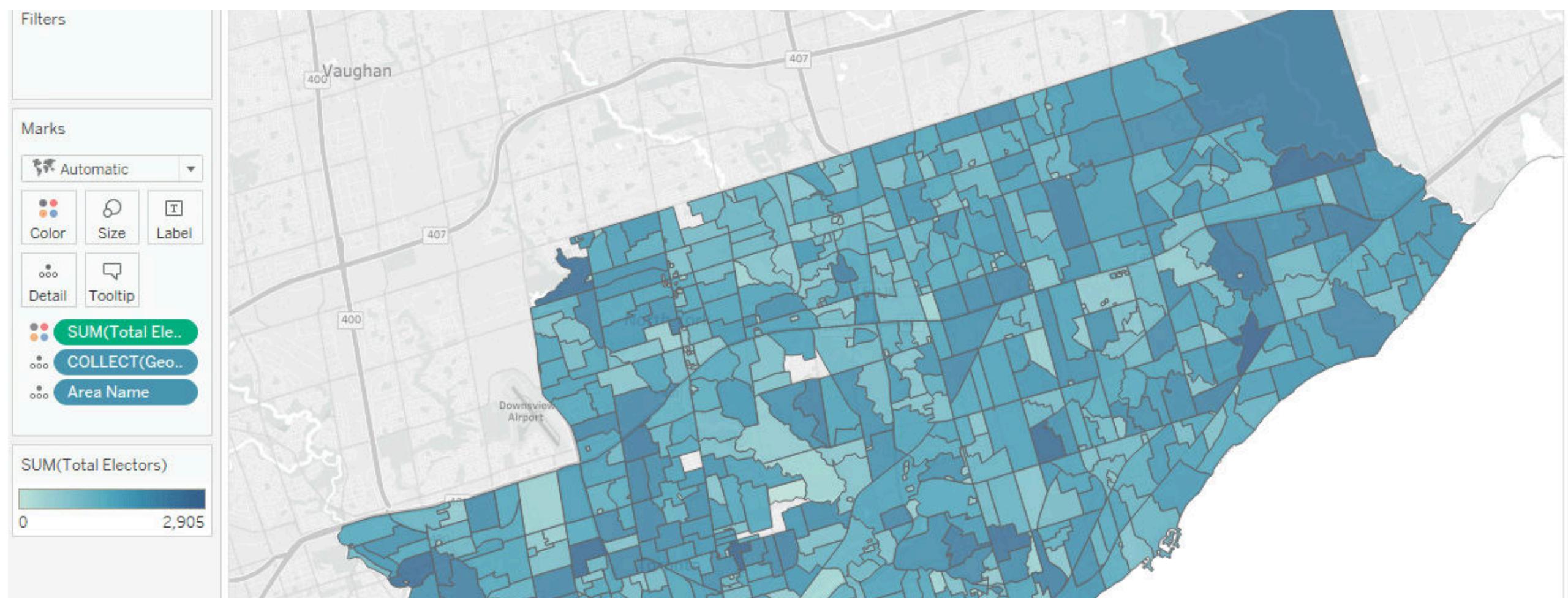
- Explore advanced chart types like treemaps, box plots, and heatmaps.
- Learn to use dual-axis charts for comparison.



Datasets

- Global Terrorism Database: A dataset containing information on global terrorist incidents, great for advanced chart types.

Maps and Geospatial Analysis





Project for the Day

- Connect to a dataset with geographical information (e.g., sales by location).
- Create a map visualization to show sales by region.
- Use geospatial analysis to identify regions with the highest sales.



Practice Questions

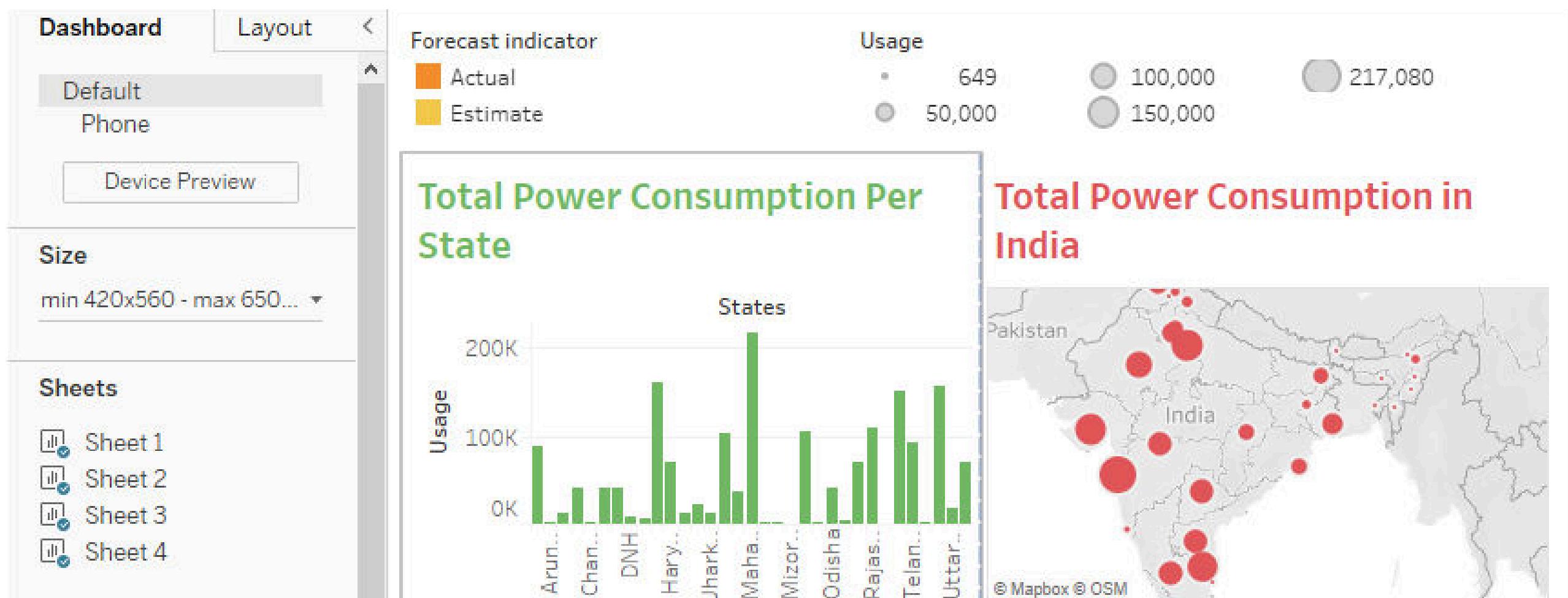
- Create maps using geographical data.
- Perform geospatial analysis with Tableau.



Datasets

- World Bank Data: Datasets from the World Bank on various economic and demographic indicators, useful for geospatial analysis.

Dashboard Creation



Resources for Learning

- Tableau Online Help: [Create Dashboards](#)
- Tableau Training: [Creating Dashboards](#)



Project for the Day

- Combine your visualizations into a dashboard.
- Create a dashboard that provides an overview of your data, with interactivity through actions and filters.



Practice Questions

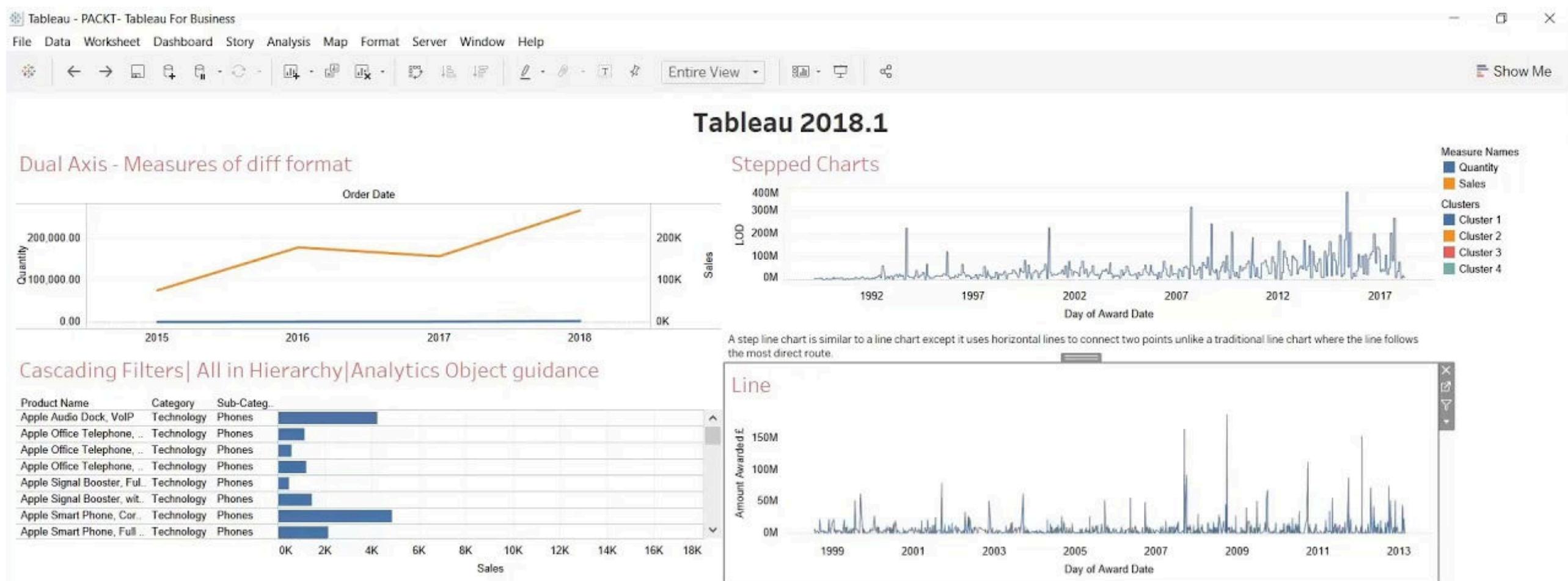
- Design interactive dashboards with multiple sheets.
- Add actions and filters to enhance dashboard interactivity.



Datasets

- World Bank Data: Datasets from the World Bank on various economic and demographic indicators, useful for geospatial analysis.

Interactive Dashboards



Resources for Learning

- Tableau Online Help: [Add Interactive Features to Dashboards](#)
- YouTube Tutorial: [Creating Interactive Dashboards in Tableau](#)



Project for the Day

- Enhance the dashboard created on Day 10 with interactive features.
- Add actions that allow users to cross-filter and navigate between different visualizations.



Practice Questions

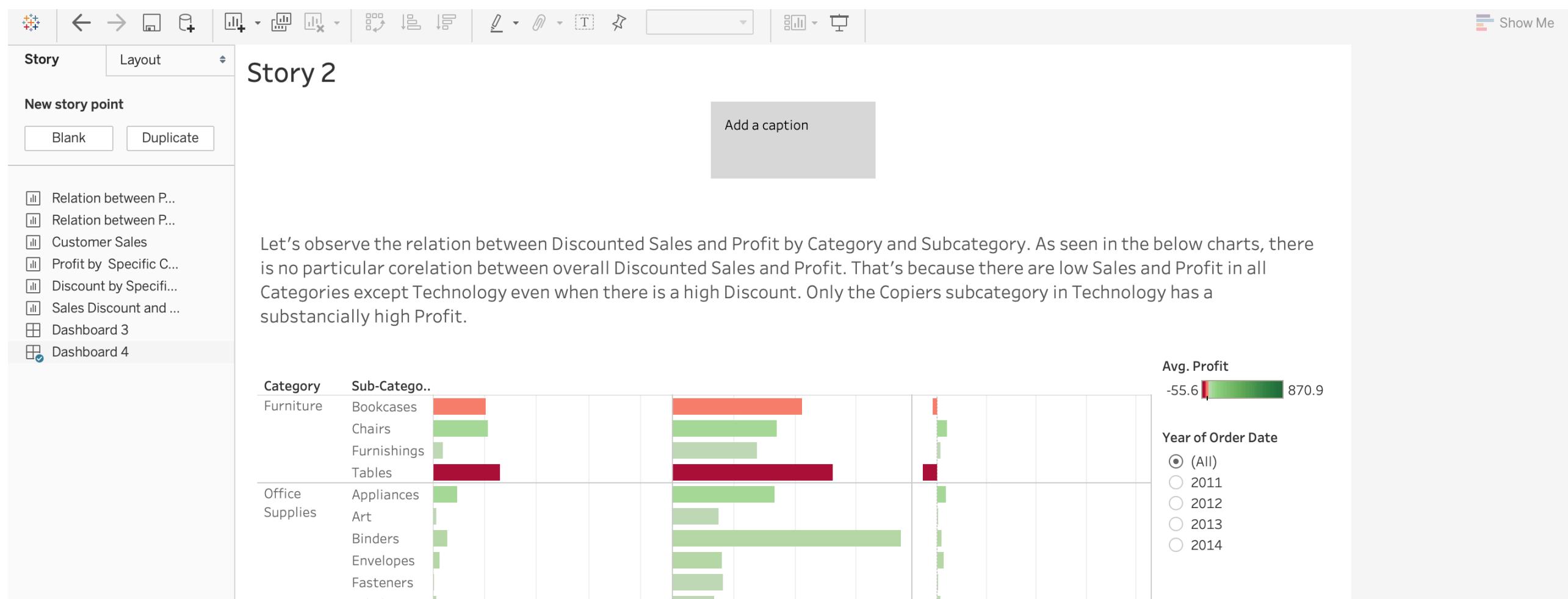
- Implement actions, filters, and URL actions to enhance dashboard interactivity.



Datasets

- Sample Superstore Sales: Practice making your dashboard interactive with this dataset.

Data Storytelling





Project for the Day

- Select a dataset and create a data story using Tableau.
- Structure the story with a clear beginning, middle, and end, using visualizations to support the narrative.

? Practice Questions

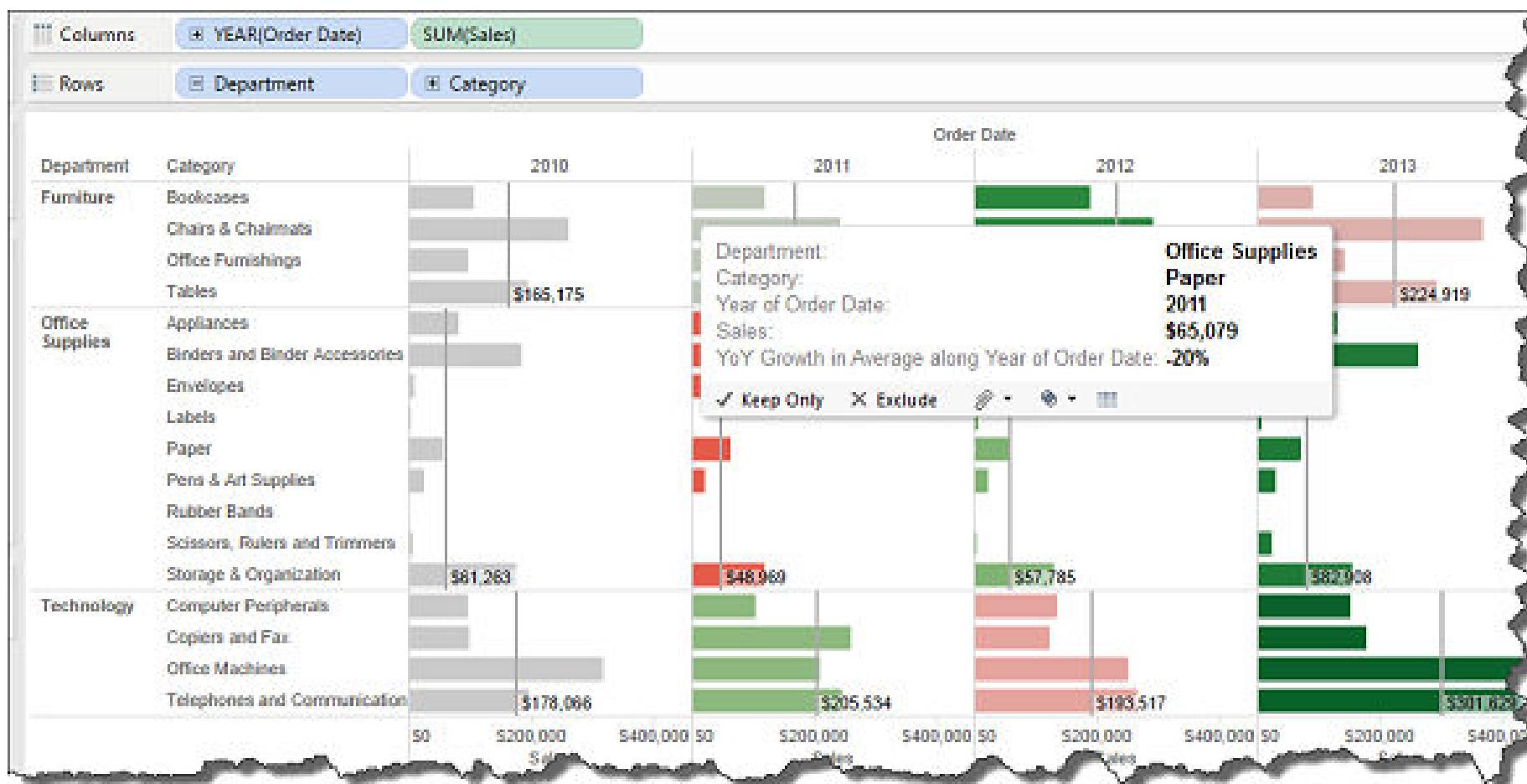
- Learn the art of data storytelling using visualizations.
- Create a data story with a clear narrative.



Datasets

- Netflix Movies and TV Shows: A dataset containing information about movies and TV shows available on Netflix, ideal for storytelling practice.

Advanced Calculations (Level of Detail Expressions)





Project for the Day

- Use your dataset to create a calculated field using LOD expressions to solve a specific analytical challenge.

? Practice Questions

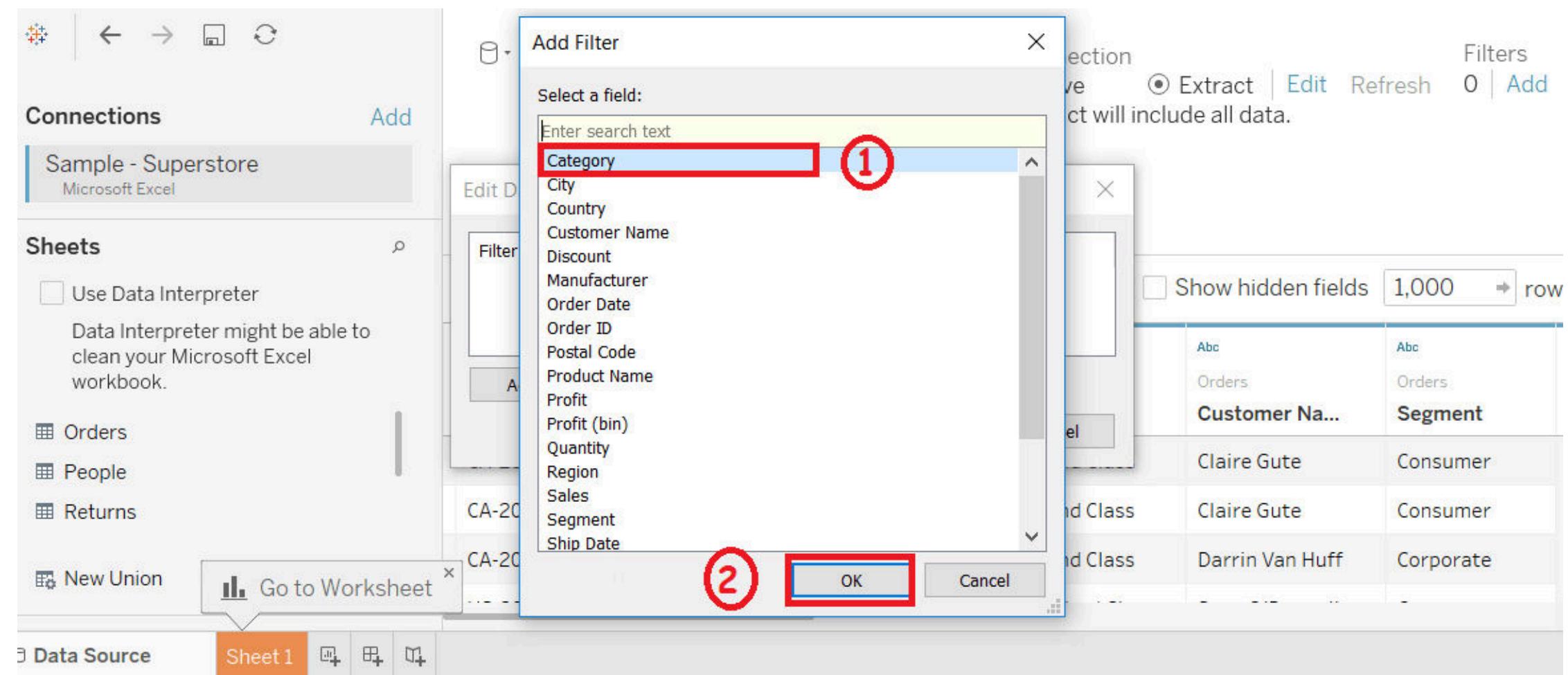
- Understand and use Level of Detail (LOD) expressions for advanced calculations.



Datasets

- Football (Soccer) Player Data: A dataset with information about FIFA 19 players, suitable for LOD expression practice.

Data Source Filters and Context Filters





Project for the Day

- Create a dashboard with multiple filters, including data source filters and context filters, to control the data displayed in your visualizations.

? Practice Questions

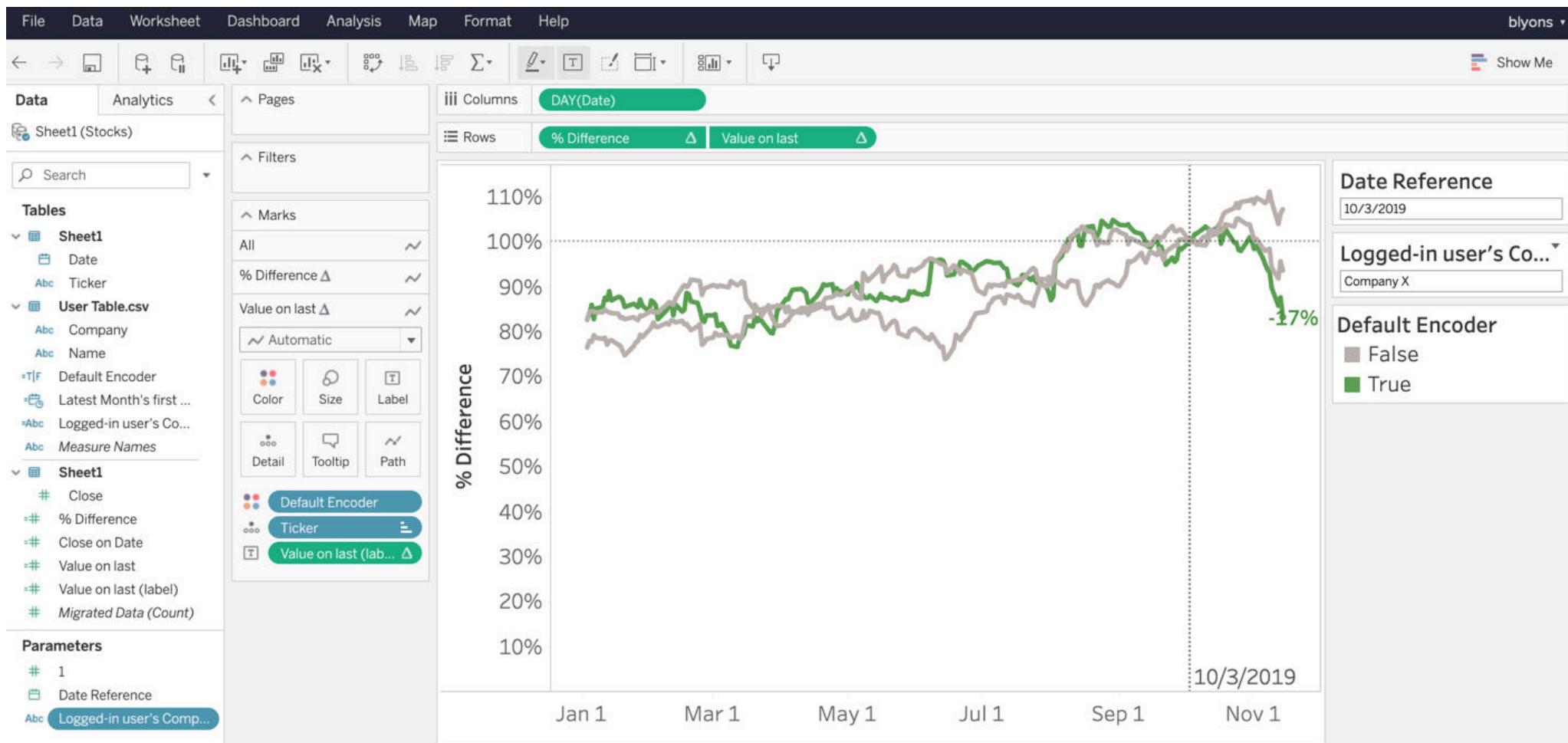
- Apply data source filters and context filters to limit data in your visualizations.



Datasets

- Sample EU Superstore: Use this dataset to practice data source filters and context filters.

Parameters for Dynamic Dashboards





Project for the Day

- Enhance your dashboard with parameters that enable users to change key variables or criteria in real time.



Practice Questions

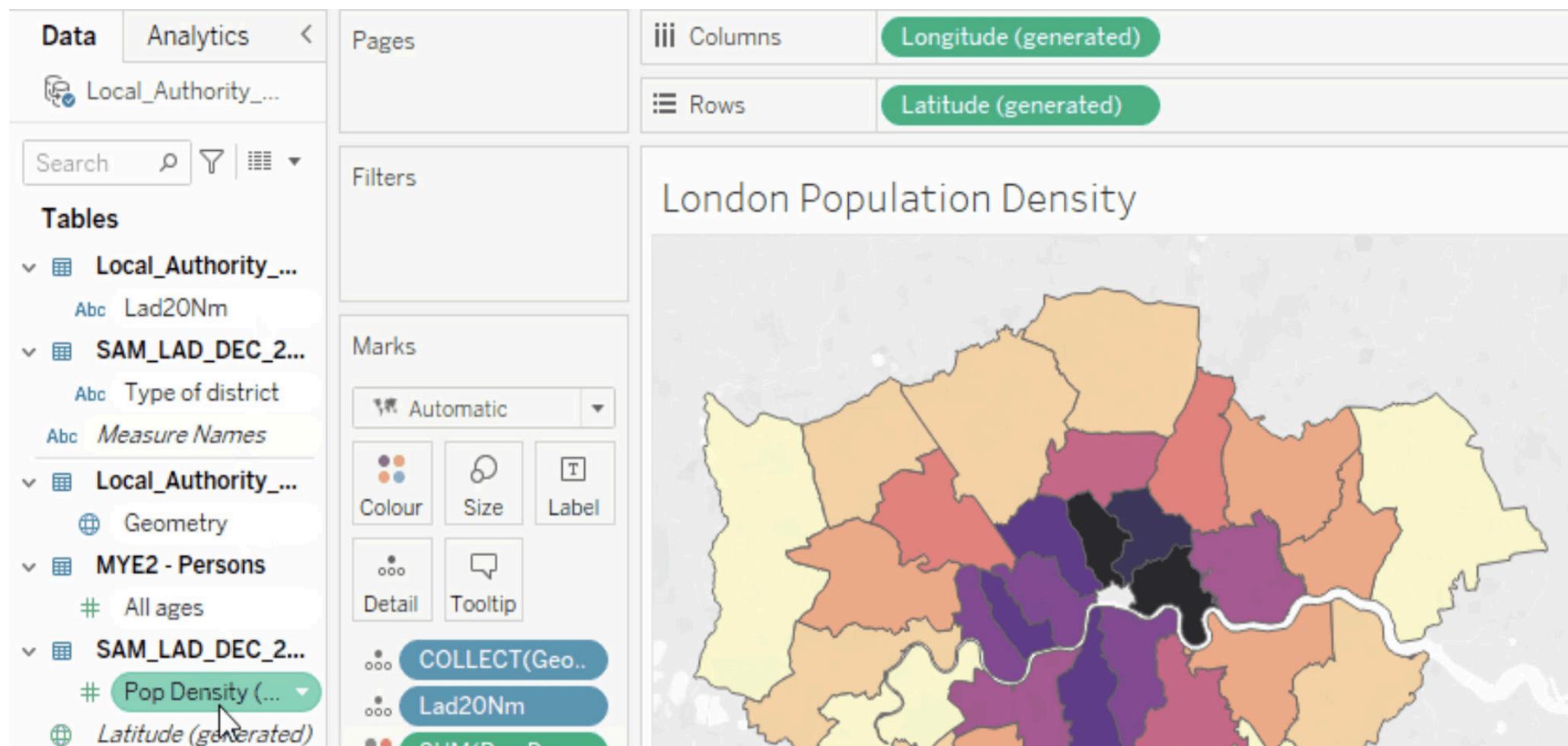
- Create parameters to allow users to dynamically change data inputs.



Datasets

- Sample Superstore Sales: Create parameters to make your dashboard dynamic.

Advanced Mapping Techniques





Project for the Day

- Create a map with custom geocoding to visualize data in locations not covered by standard geocoding.
- Experiment with background images to create custom map visuals.



Practice Questions

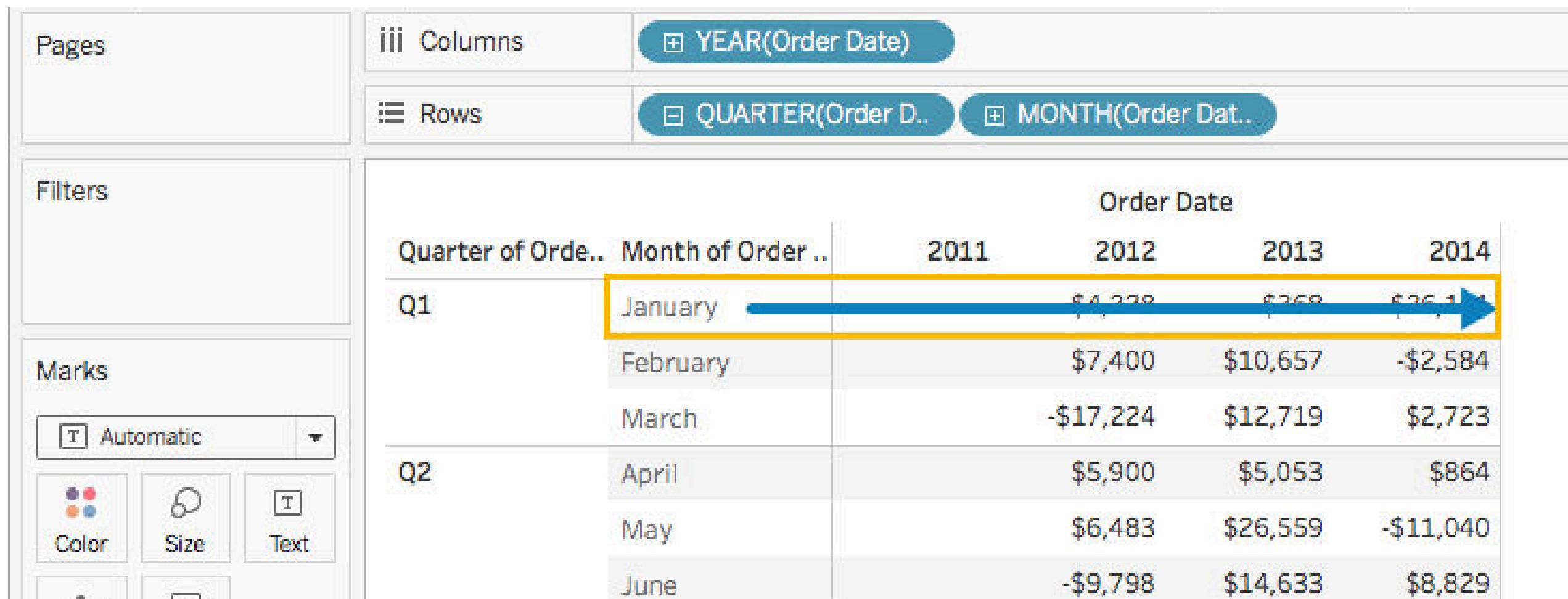
- Explore advanced mapping features in Tableau, such as custom geocoding and background images.



Datasets

- [US Census Data](#): Datasets from the US Census Bureau for advanced mapping practice.

Calculations with Table Calculations





Project for the Day

- Apply table calculations to create dynamic visualizations in your dashboard.

? Practice Questions

- Understand and use table calculations for dynamic calculations within visualizations.



Datasets

- COVID-19 Data: COVID-19 datasets for practicing table calculations.

Forecasting and Trend Analysis





Project for the Day

- Apply forecasting techniques to your dataset to predict future trends or values.

? Practice Questions

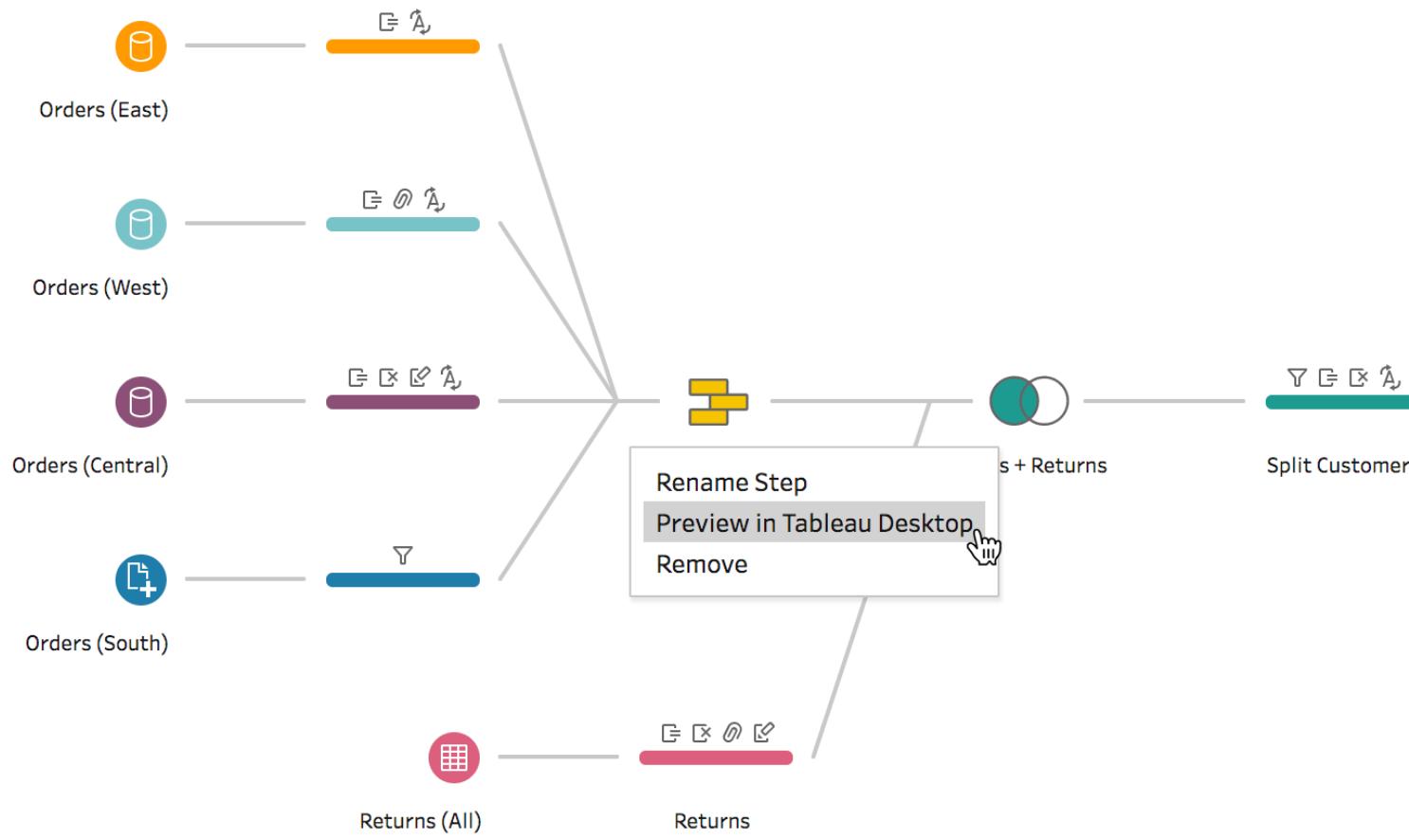
- Use forecasting and trend analysis to make future predictions based on historical data.



Datasets

- Stock Market Data: Historical stock market data for practicing forecasting.

Advanced Data Preparation (Data Prepping)





Project for the Day

- Take a dataset with messy or unstructured data and use Tableau's data preparation tools to clean and reshape it for analysis.

? Practice Questions

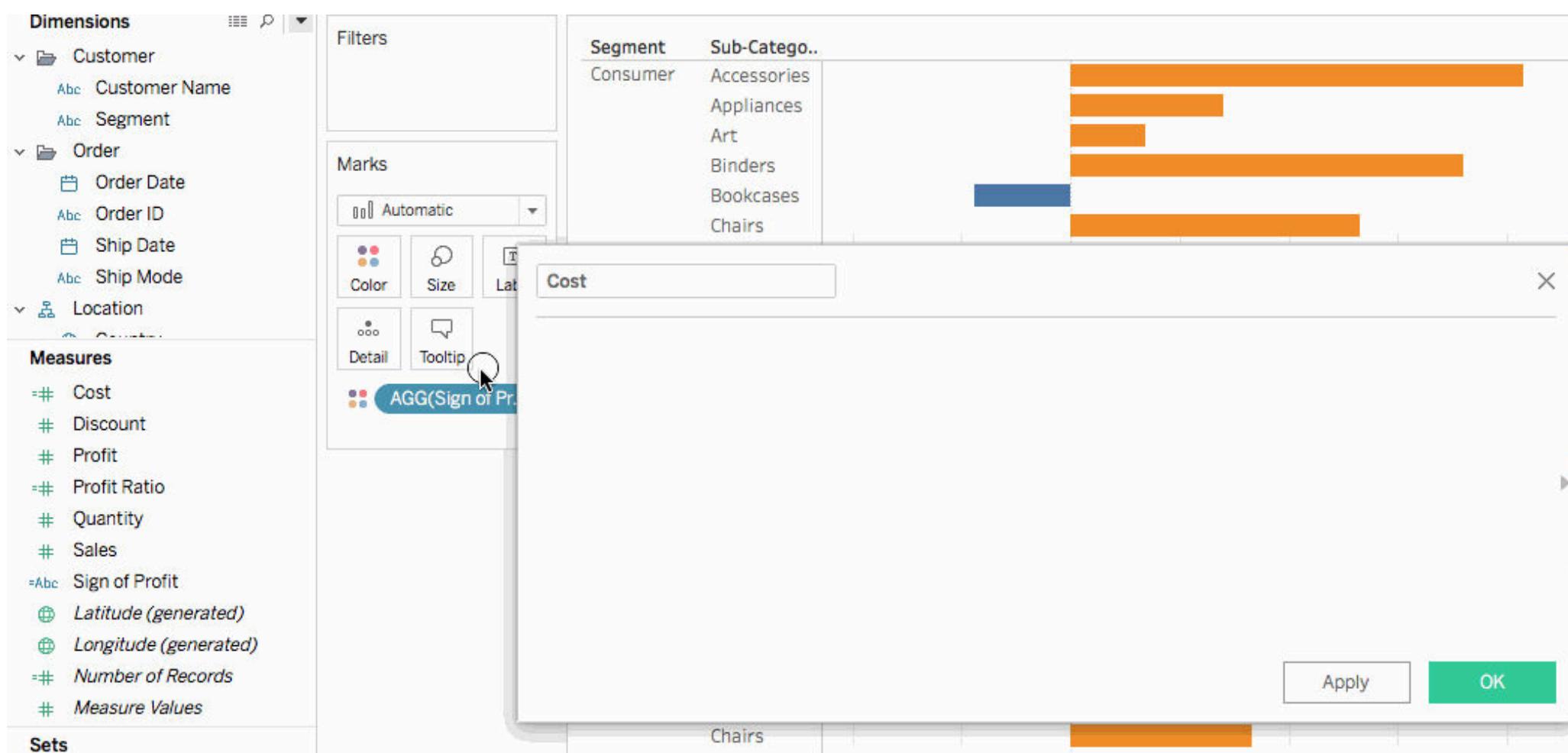
- Learn advanced data preparation techniques within Tableau.



Datasets

- Air Quality Data: A dataset containing air quality measurements for data cleaning and preparation practice.

Creating and Using Tableau Calculated Fields (Custom Functions)





Project for the Day

- Define a custom function and apply it to your dataset using calculated fields.



Practice Questions

- Create custom functions using calculated fields in Tableau.



Datasets

- Housing Price Data: A dataset for practicing custom calculations.

Advanced Dashboard Design



Resources for Learning

- [Tableau Online Help: Dashboard Design Tips](#)
- [YouTube Tutorial: Advanced Dashboard Design in Tableau](#)



Project for the Day

- Redesign one of your previous dashboards with advanced design principles.
- Use layout containers and sizing options to create a polished and user-friendly dashboard.



Practice Questions

- Learn advanced dashboard design techniques.
- Experiment with layout containers and sizing.



Datasets

- World Happiness Report: Datasets related to global happiness rankings, suitable for advanced dashboard design.

Working with Big Data in Tableau

```

index.html PRETTIER
 32
 33
 34
 35
 36
 37
 38
 39
 40
 41
 42
 43
 44
 45
 46
 47
 48
 49
 50
 51
 52
 53
 54
 55
 56
 57
 58
 59
 60
 61
 62
 63
 64
 65
 66
 67
 68
 69
 70
    }
  }

  const signedToken = getJwt();

  const tokenTextArea = document.getElementById("token");
  tokenTextArea.value = signedToken;

  const viz = document.getElementById("tableauViz");
  viz.token = signedToken;
  viz.src = config.workbookUrl;

  function getJwt() {
    const header = {
      alg: "HS256",
      typ: "JWT",
      kid: config.connectedApp.secretId,
      iss: config.connectedApp.clientId,
    };

    const data = {
      jti: uuidv4(),
      iss: config.connectedApp.clientId,
      aud: "tableau",
      sub: config.username,
      scp: config.scopes,
      iat: Math.floor(Date.now() / 1000) - 5,
      exp: Math.floor(Date.now() / 1000) + 5 * 60,
      Region: "West",
    };
  }

  const headerTextArea = document.getElementById("header");
  headerTextArea.value = JSON.stringify(header, null, 2);

  const dataTextArea = document.getElementById("data");
  dataTextArea.value = JSON.stringify(data, null, 2);

  const encodedHeader = base64url(CryptoJS.enc.Utf8.parse(JSON.stringify(header)));
  const encodedData = base64url(CryptoJS.enc.Utf8.parse(JSON.stringify(data)));

```

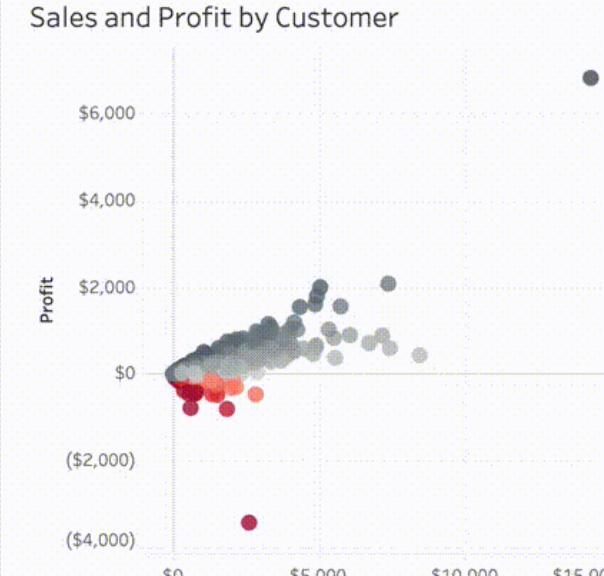
jewel-tough-quartz.glitch.me/

Debug Render Mode: B

Customer Analysis

| | Count of Customers | Sales | Quantity | Sales per Customer | Profit |
|------|--------------------|-----------|----------|--------------------|--------|
| West | 686 | \$725,458 | 12,266 | \$1,058 | \$: |

Sales and Profit by Customer



Customer Ranking

| Customer Name | Revenue |
|---------------------|---------|
| Raymond Buch | \$1 |
| Ken Lonsdale | \$8,472 |
| Edward Hooks | \$7,448 |
| Jane Waco | \$7,392 |
| Karen Ferguson | \$7,183 |
| Nick Crebassa | \$6,734 |
| Clay Ludtke | \$6,070 |
| Yana Sorensen | \$5,754 |
| Nora Preis | \$5,565 |
| William Brown | \$5,523 |
| Rick Wilson | \$5,348 |
| Fred Hopkins | \$5,054 |
| Dennis Pardue | \$4,942 |
| Max Jones | \$4,910 |
| Tamara Willingham | \$4,908 |
| Robert Marley | \$4,881 |
| Keith Herrera | \$4,810 |
| Maribeth Schnellino | \$4,468 |



Project for the Day

- Connect to a large dataset (e.g., big sales data) and create a meaningful visualization.

? Practice Questions

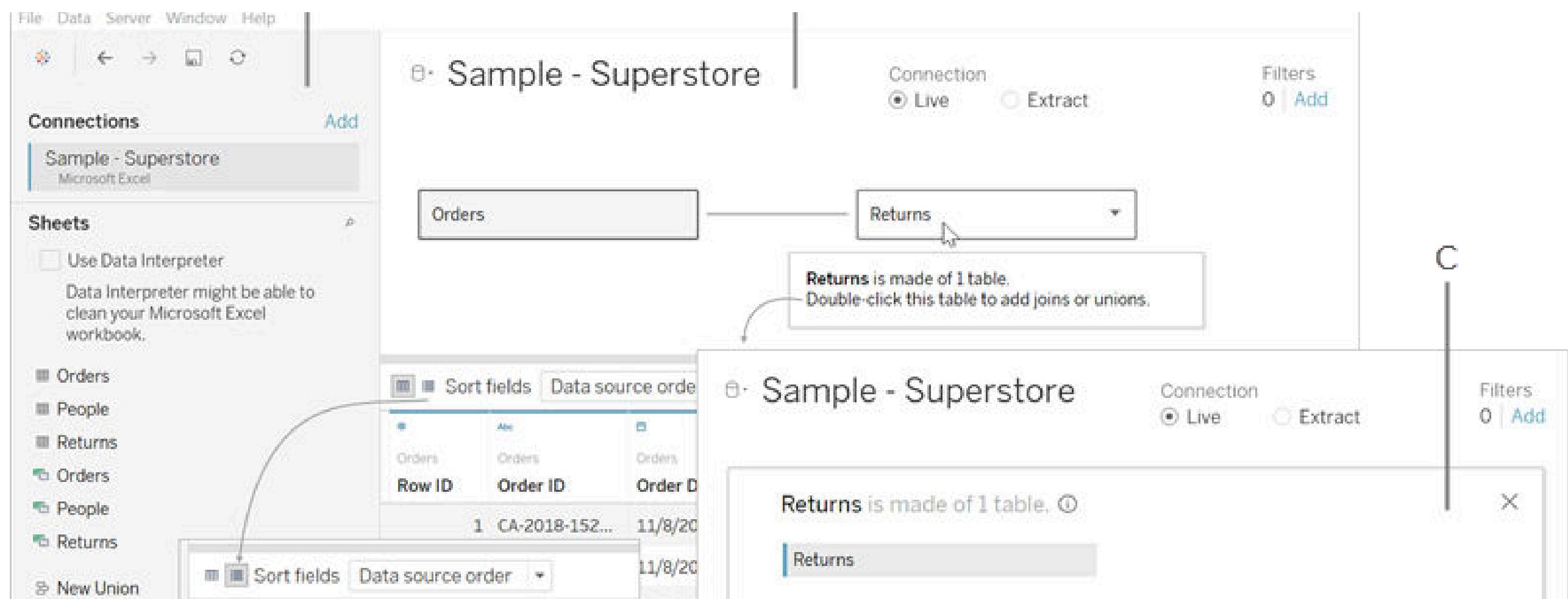
- Understand how to connect and analyze large datasets in Tableau.
- Explore data source options like Hadoop and cloud-based services.



Datasets

- NYC Taxi Trip Data: A large dataset of NYC taxi trips, useful for practicing big data handling in Tableau.

Advanced Data Source Connections





Project for the Day

- Connect to a database using custom SQL queries and create visualizations based on complex data queries.

? Practice Questions

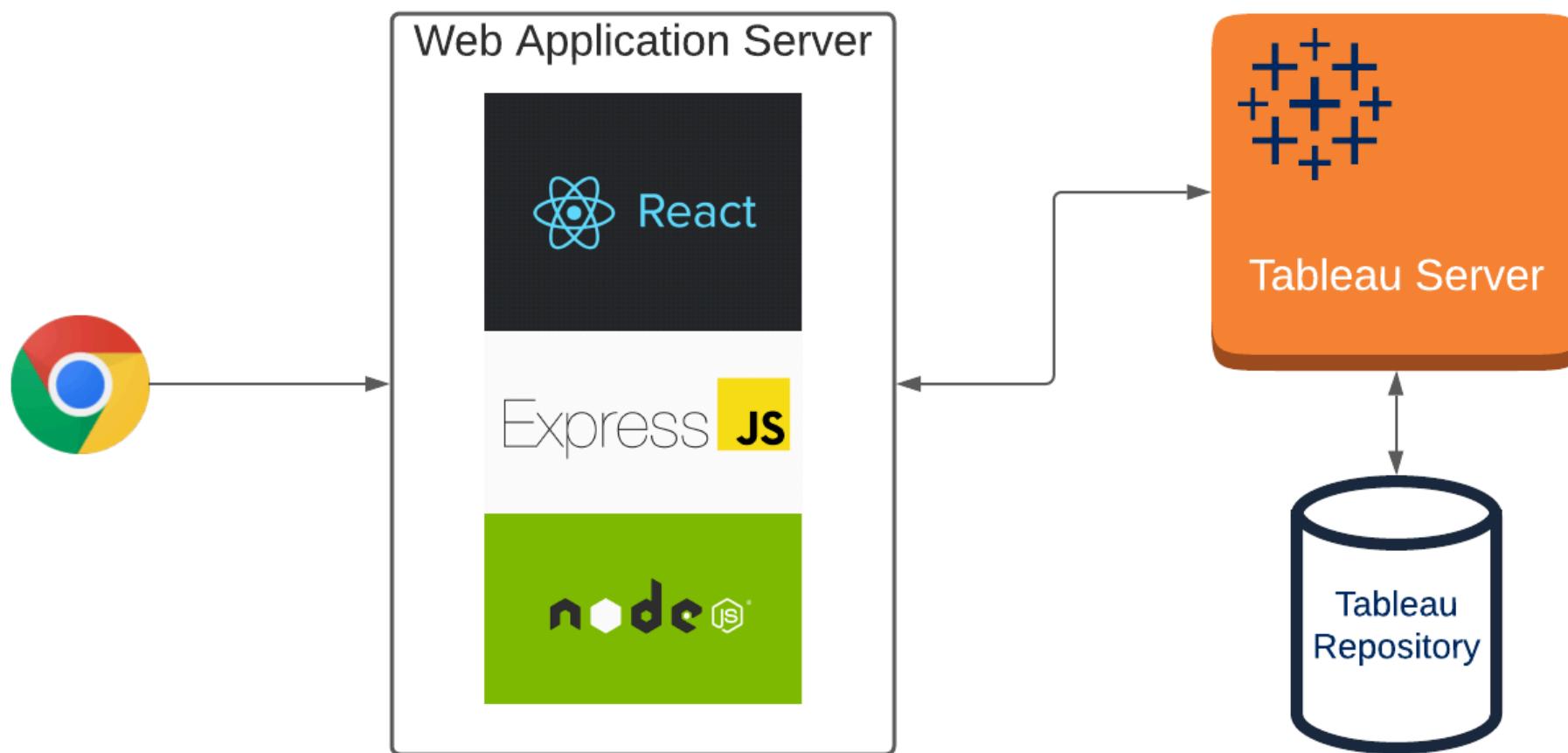
- Dive deeper into data source connections with custom SQL and joins.



Datasets

- NYC Taxi Trip Data: A large dataset of NYC taxi trips, useful for practicing big data handling in Tableau.

Integrating Tableau with Other Tools (e.g., R, Python)





Project for the Day

- Integrate Tableau with either R or Python to perform advanced analytics on your data.

? Practice Questions

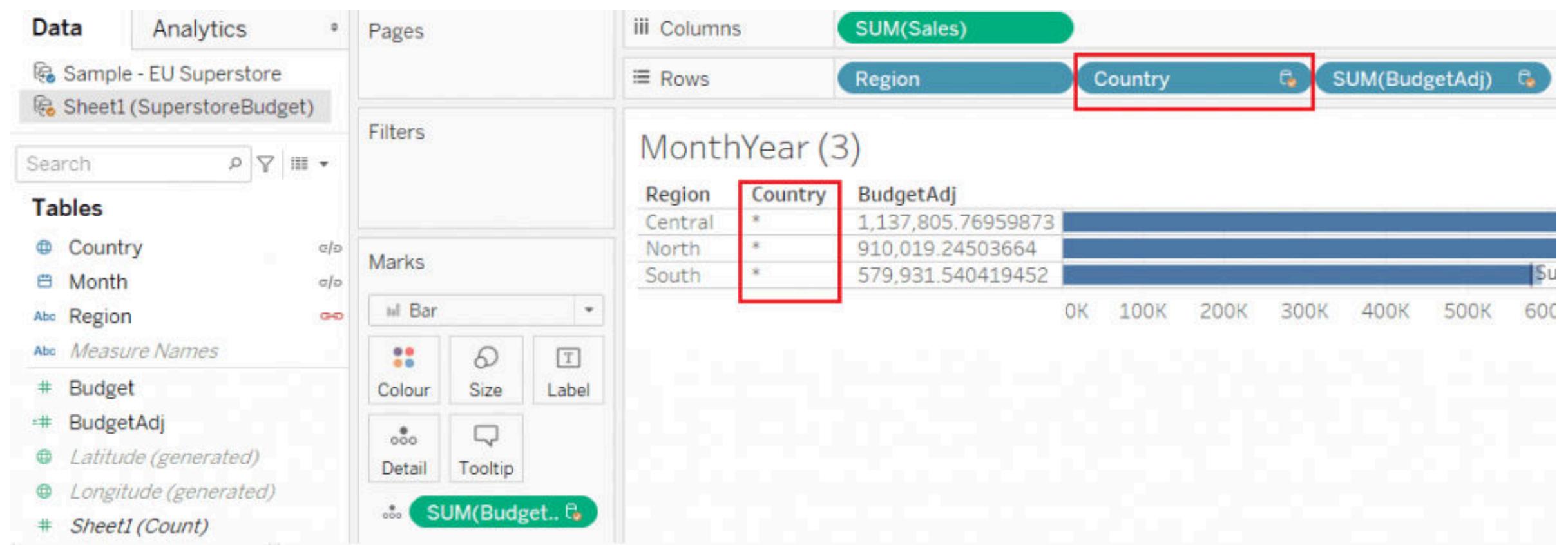
- Explore how to integrate Tableau with external analytics tools.
- Learn to use calculated fields with R or Python scripts.



Datasets

- E-commerce Customer Data: A dataset containing e-commerce customer information, suitable for integrating Tableau with external analytics tools like R or Python.

Advanced Data Blending Techniques





Project for the Day

- Work with multiple datasets, combining them using advanced data blending techniques to create a comprehensive dashboard.

? Practice Questions

- Master advanced data blending techniques for complex data relationships.

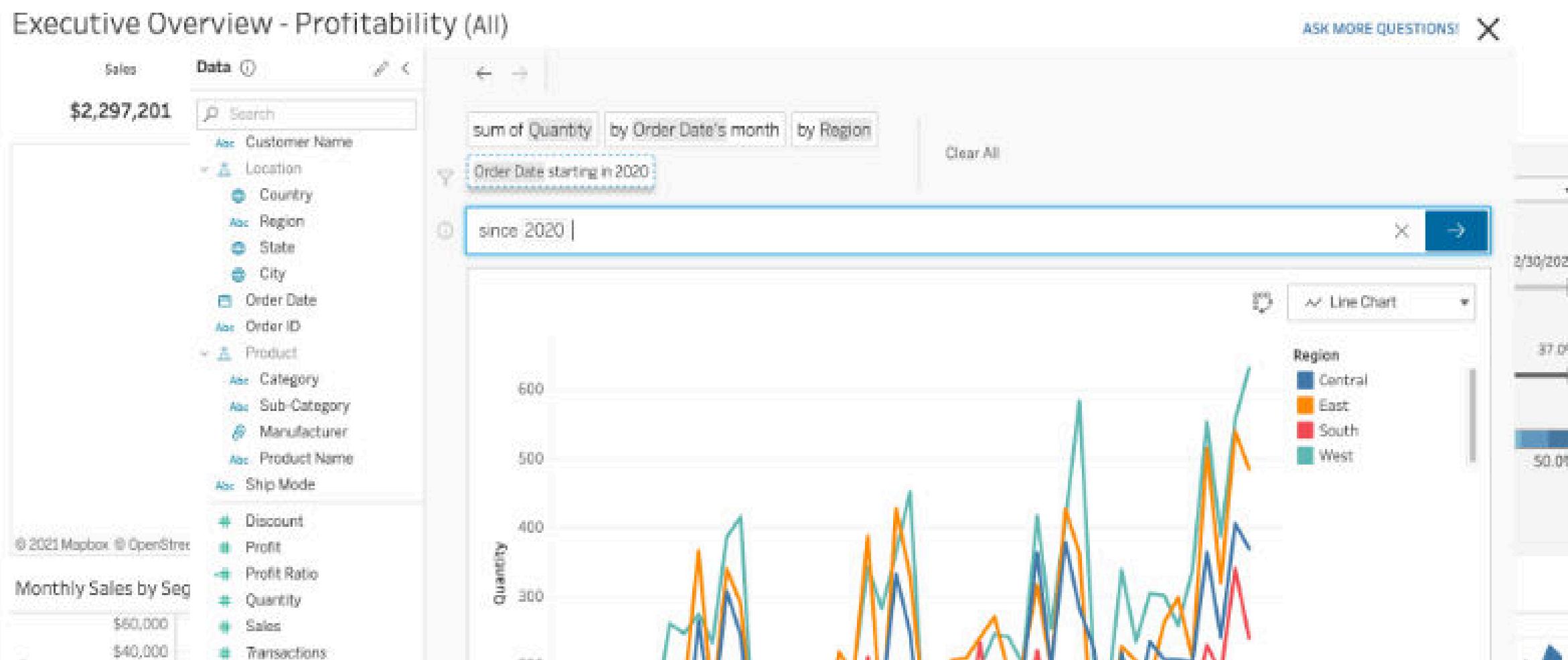
Project for the Day:



Datasets

- MovieLens Dataset: Movie ratings data for practicing advanced data blending techniques.

Advanced Analytics and Machine Learning Integration





Project for the Day

- Incorporate advanced analytics or a machine learning model into one of your Tableau dashboards.



Practice Questions

- Explore advanced analytics capabilities within Tableau.
- Integrate machine learning models into your visualizations.

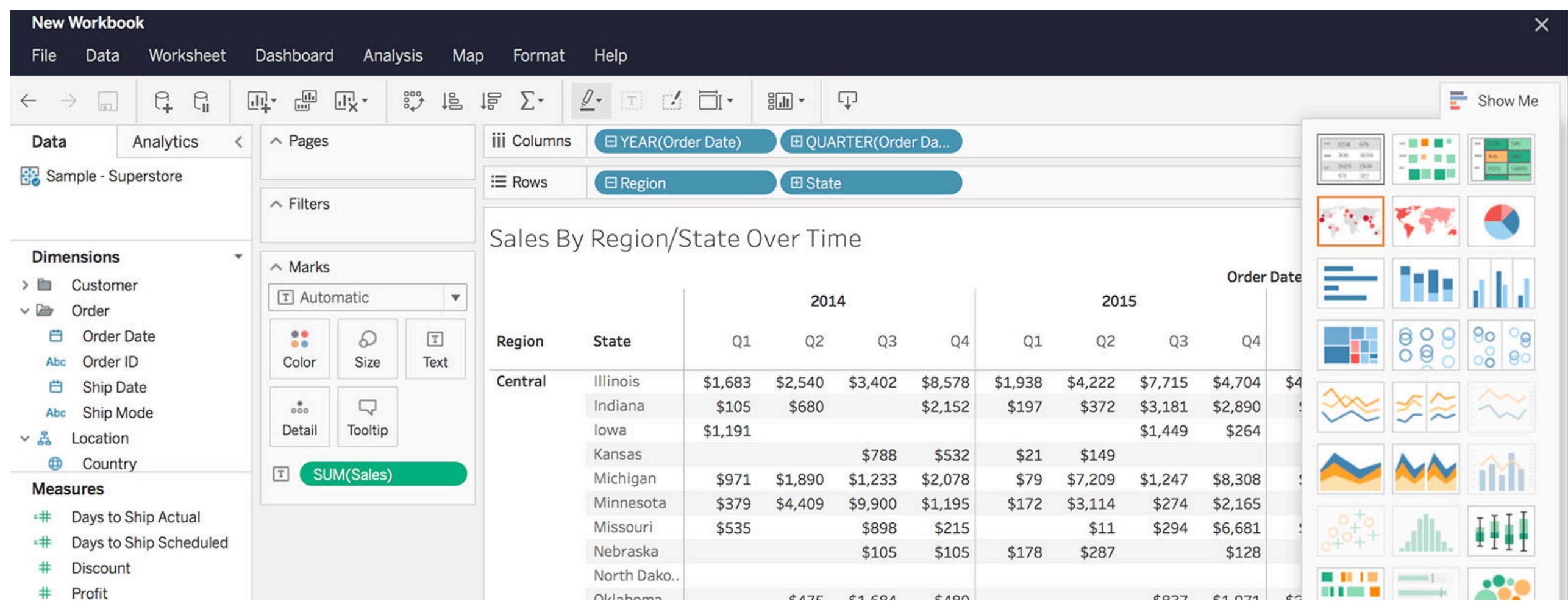


Datasets

- Credit Card Fraud Detection: A dataset for fraud detection, perfect for integrating machine learning models into Tableau.



Tableau Server and Collaboration





Project for the Day

- If possible, install Tableau Server (or use a trial) and explore its features for collaboration and sharing.

? Practice Questions

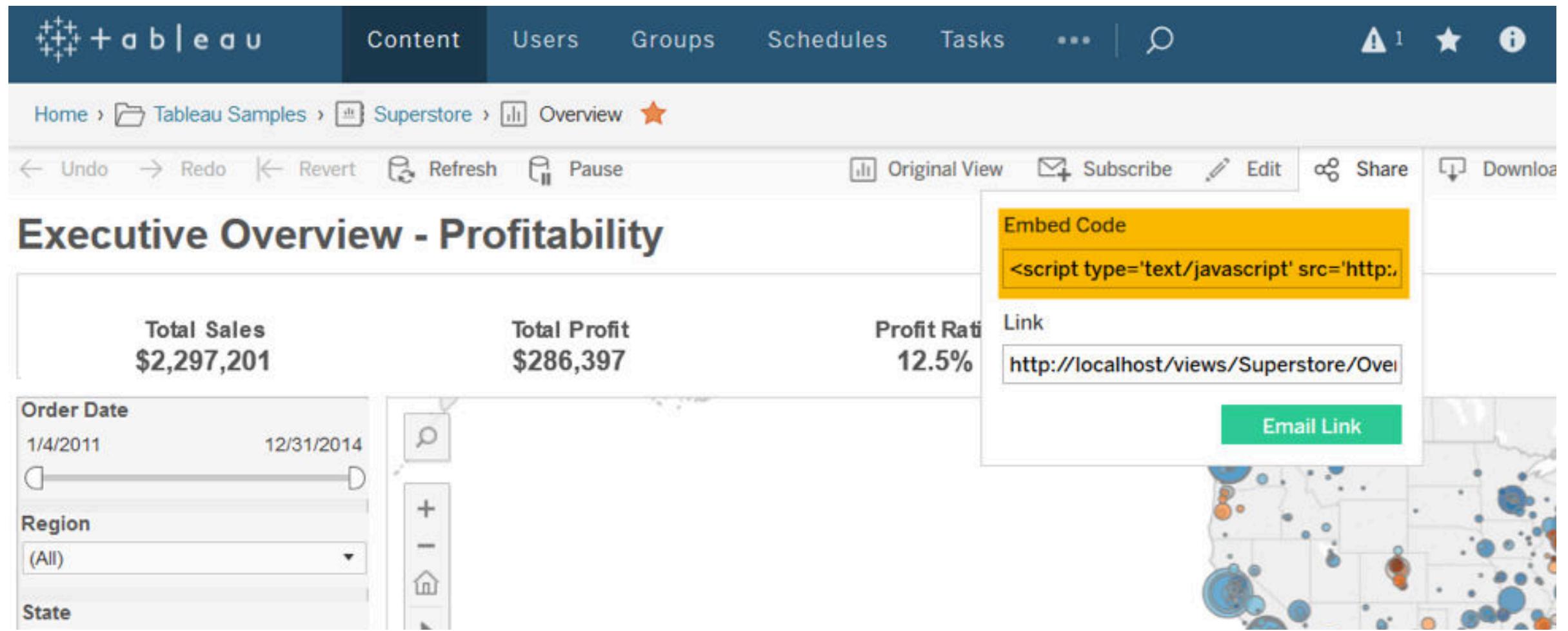
- Understand Tableau Server's role in collaboration and sharing.
- Learn about user roles, permissions, and publishing.



Datasets

- Employee Sales and Performance Data: A dataset simulating employee sales and performance data, useful for exploring Tableau Server's collaboration features.

Embedding Tableau Visualizations



The screenshot shows a Tableau dashboard titled "Executive Overview - Profitability". The dashboard displays three key metrics:

- Total Sales: \$2,297,201
- Total Profit: \$286,397
- Profit Ratio: 12.5%

Below these metrics are filtering controls for "Order Date" (range from 1/4/2011 to 12/31/2014) and "Region" (set to "(All)"). To the right of the dashboard, a context menu is open, highlighting the "Embed Code" option. The embed code is shown as a snippet of JavaScript:

```
<script type='text/javascript' src='http://...>
```

Below the embed code, there is a "Link" section containing a URL:

<http://localhost/views/Superstore/Overview>

A green button labeled "Email Link" is also visible. In the bottom right corner of the dashboard area, there is a small map visualization.



Project for the Day

- Embed one of your Tableau visualizations in a personal website or blog (if applicable).

? Practice Questions

- Learn how to embed Tableau visualizations in websites and applications.



Datasets

- Census Bureau Data: Various datasets from the United States Census Bureau, great for embedding Tableau visualizations in websites or applications.



Tableau Certification Preparation

Tableau Desktop Exams

Testing on version 2018.2

Desktop Specialist

Focused on foundational functionality and product comprehension

Fee: \$100 (50% off until December 31, 2018)

Suggested Training: [Desktop I](#)

Required Prerequisites: None

Suggested Product Experience: 3+ Months

Exam Prep Guide: [Download here](#)

Desktop Qualified Associate

Comprehensive functionality and product expertise

Fee: \$250

Suggested Training: [Desktop I & Desktop II](#)

Required Prerequisites: None

Suggested Product Experience: 5+ Months

Exam Prep Guide: [Download here](#)

Desktop Certified Professional

Advanced functionality and application of visual best practices

Fee: \$600

Suggested Training: [Desktop III & Visual Analytics](#)

Required Prerequisites: Active Desktop Qualified Associate

Suggested Product Experience: 12+ Months



Project for the Day

- Take a mock Tableau certification exam to assess your readiness.

? Practice Questions

- Take a mock Tableau certification exam to assess your readiness.



Datasets

- Tableau Sample Exam Datasets: Access sample datasets provided by Tableau to prepare for certification exams.

Final Project Showcase and Review



Project for the Day

- Use any of the completed dashboards or visualizations from previous days.
- Polish and finalize your comprehensive Tableau project.
- Share your project with your network, mentor, or online Tableau community for feedback and recognition.

❓ Practice Questions

- Review and summarize the skills you've developed over the past 30 days.
- Showcase your final Tableau project to peers, mentors, or online communities.

Datasets

- Choose any dataset that aligns with your interests and showcase the skills you've learned over the 30 days in a comprehensive Tableau project.

India's First Paid Internship Programme



ENROLL NOW

Enhance your skills
with the latest
technological
education and pave
the way for a
successful career.

Enroll in a course at
Vihara Tech today.

+91 78428 89838

@viharatech

www.viharatech.com

