Week 7 – Business Analytics Fundamentals – Sydney Campus

1. Review of Lecture 6
2. Mastering Concepts for Tutorial Week 7
3. Tutorial Week 7 – step-by-step instruction
4. Attendance & Tutorial Questions - Recognising student participation and engagement specifically identifying those who are most actively involved!

Lecturer/Tutor: Dr. Farshid Keivanian

1. Summary of Lecture 6

Lecture 6 emphasized the critical role of Data Visualization in effective communication. The lecture introduced us to the International Business Communication Standards (IBCS) and discussed concepts like data ink versus non-data ink, outlining best practices for creating meaningful visualizations. Through historical examples, such as William Playfair's trade balance charts and John Snow's dot map, the lecture illustrated the evolution of data visualization. A six-step process was detailed, focusing on choosing the right format, encoding values, and designing visual elements to highlight key data. Additionally, the lecture covered IBCS rules—conceptual, perceptual, and semantic—to ensure clarity and consistency in visual communication. Practical examples and exercises were provided, encouraging students to apply these standards to enhance clarity, accuracy, and effectiveness in their visual projects.

2. Mastering Concepts for Tutorial Week 7

The Week 7 tutorial of the HI6037 Fundamentals of Business Analytics course centers around using Microsoft Power BI to create effective data visualizations, particularly focusing on dashboard creation. This session provides a comprehensive guide on acquiring and transforming data sources through the Query Editor and subsequently crafting a dashboard.

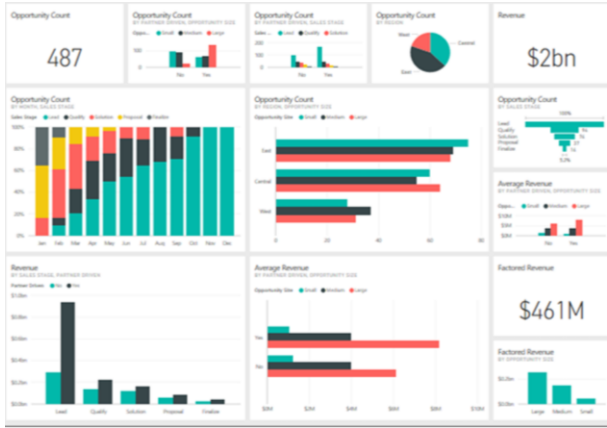
2. Mastering Concepts for Tutorial Week 7

Key Concepts and Steps Covered:

- **Historical Examples:** Reflection on foundational data visualizations like William Playfair's Trade Balance and John Snow's Dot Map.
- **Dashboard Fundamentals:** Introduction to dashboard creation in Power BI, understanding tiles and their interactions.
- **Process of Data Visualization:**
    1. Identifying the key message and relevant data.
    2. Choosing the appropriate medium (graphs, tables, etc.) to convey this message.
    3. Designing and laying out the dashboard to optimize clarity and viewer engagement.
    4. Highlighting critical data to draw attention to key insights.

3. Tutorial week 7 – Introduction to dashboards for Power BI designers

A Power BI dashboard is a powerful visualization tool designed to display the most important insights from data on a single page, referred to as a canvas. It integrates various visual elements such as charts, graphs, and maps—collectively known as tiles—to summarize and present complex data in an easily digestible format. Each tile is linked to underlying reports and datasets, enabling users to delve deeper into the details as needed. This dashboard setup is particularly valuable for decision-makers and business analysts, as it provides a high-level overview of key metrics and trends at a glance, facilitating quick and informed decisions. The ability to customize and interact with these dashboards in real time enhances their utility, making them an essential component in business intelligence and data analysis workflows.



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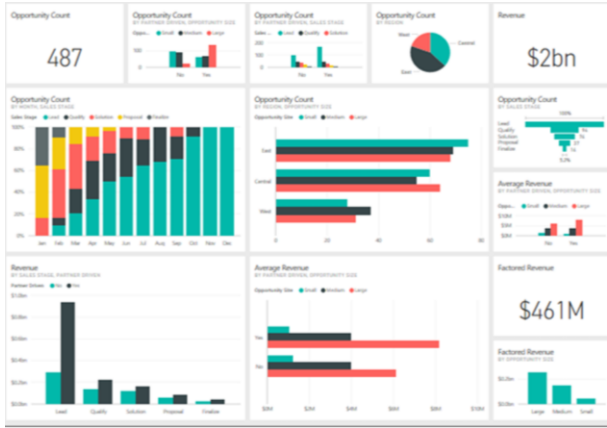
- **Dashboards and Power BI Service:** Dashboards as a feature are unique to the Power BI service. They are intended for use in a web browser or mobile app environment where they can be viewed and interacted with. This means they are not a feature that can be created within the Power BI Desktop application; however, the visualizations and reports we create in Power BI Desktop can be uploaded to the Power BI service, where we can then create dashboards from them.



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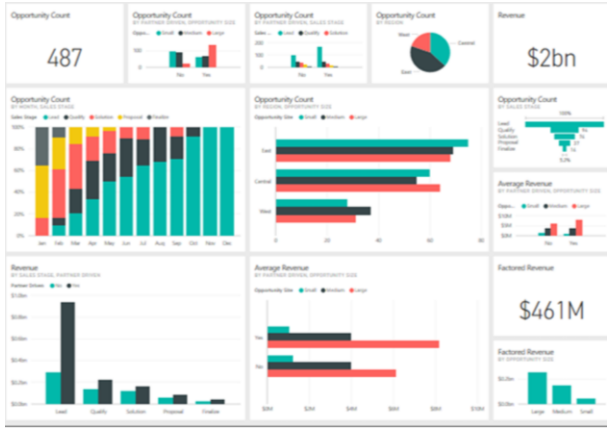
- **Creating Dashboards on Mobile Devices:** Dashboards cannot be created on mobile devices. The Power BI mobile app primarily serves for viewing and sharing the dashboards, not for creating them. Creation and extensive editing of dashboards are tasks reserved for the Power BI service on a desktop browser.



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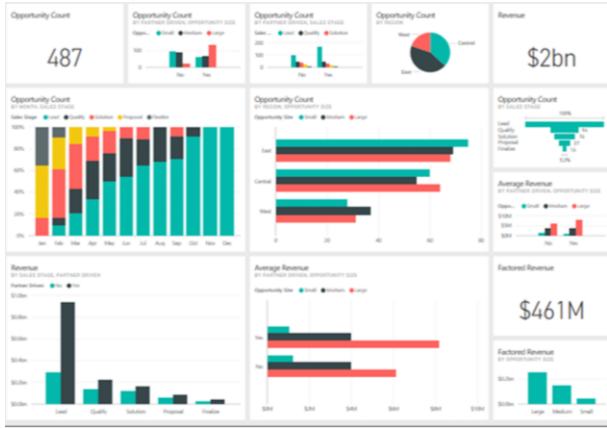
- **Dashboard Basics and Tiles:** In Power BI, visualizations pinned from reports onto the dashboard are called tiles. These tiles are interactive elements that serve as the building blocks of a dashboard. They can display a variety of visualizations such as charts, graphs, and maps.



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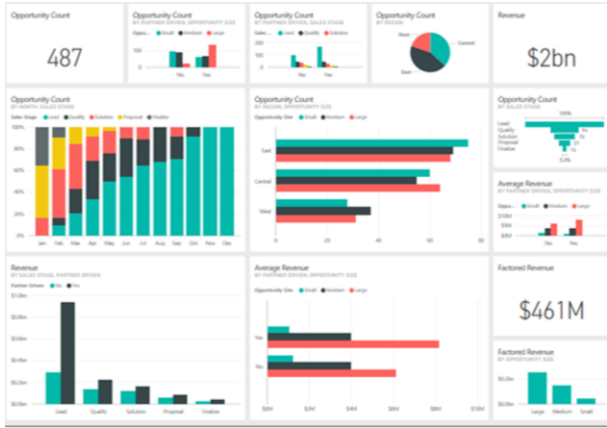
- **Navigation from Dashboards to Reports:** The way dashboards act as an entryway to the reports is an important feature. When we interact with a tile on a dashboard, it can lead us to the full report from which the data is sourced. This is particularly useful for users who need to understand the deeper context behind the visualizations they see on the dashboard.



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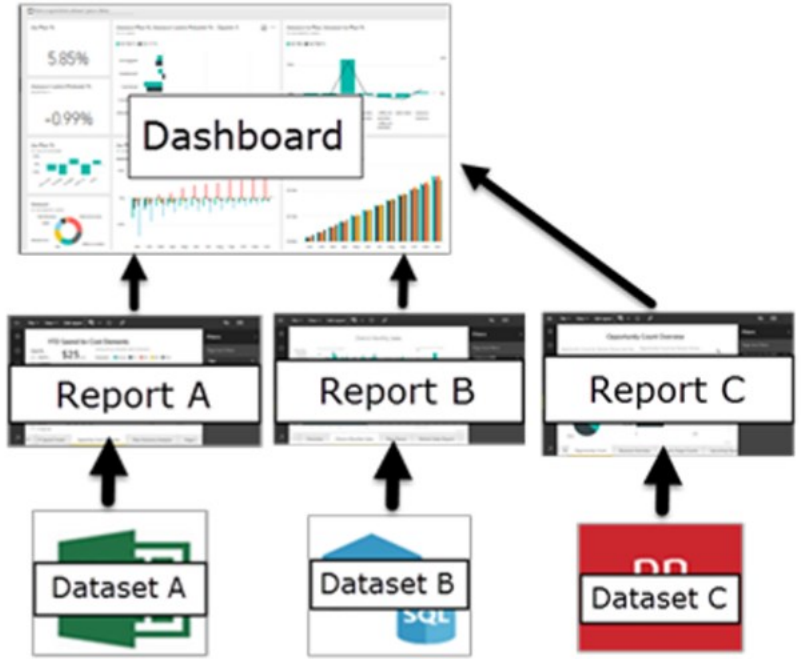
- In summary, dashboards in Power BI are a dynamic way to present and interact with key business metrics, allowing users to access summarized views of essential data and navigate to more detailed reports as needed. This setup enhances the ability of business users to make informed decisions quickly.



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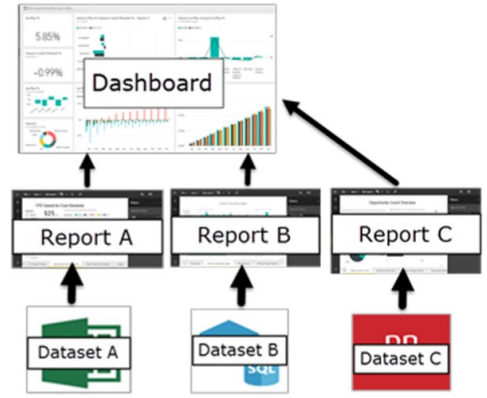
- **Advantages of Power BI dashboards:**

1. **Monitoring Business Metrics:** Dashboards are indeed a powerful tool for monitoring the most crucial metrics of a business. They allow users to see a summary of key data at a glance, which can be instrumental in making timely business decisions.
2. **Data Sources:** Dashboards can integrate visualizations from multiple sources, whether those sources are single or multiple datasets and reports. This flexibility allows dashboards to display a broad range of information, catering to diverse business needs and user preferences.



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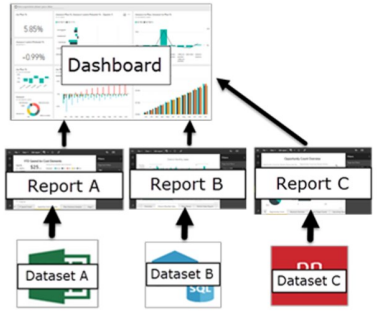
3. Combining Data from Various Locations: One of the significant strengths of Power BI dashboards is their ability to combine data from various locations, such as on-premises data sources and cloud-based data. This means we can create a unified view of information that resides in different places, making it easier to obtain a holistic view of the business operations regardless of where the data is stored.

4. Interactivity and Real-Time Updates: Dashboards in Power BI are not static; they are highly interactive. Users can interact with the tiles to get more details, filter data, and view the data in different perspectives. Additionally, the visualizations on a dashboard are dynamically updated as the underlying data changes, which ensures that the dashboard always reflects the most current state of the business.



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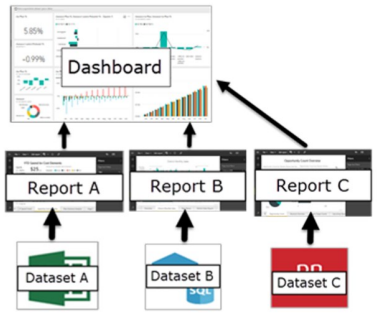
In summary, Power BI dashboards provide a comprehensive, real-time view of critical business data, drawing from diverse data sources and offering significant interactivity. This makes them not just visually appealing, but also a functional tool for strategic decision-making.



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1. **Definition of a Tile:** In Power BI, a tile is indeed a snapshot of our data that is pinned to a dashboard. It acts as a visual representation of data extracted from various sources such as reports, datasets, or even other dashboards. The versatility in the sources from which a tile can be created makes the dashboard highly customizable and useful for diverse analytical needs.

2. **Creation and Location of Tiles:** It's important to note that tiles are primarily a feature of the Power BI service online, not the Power BI Desktop application. While we can create and manipulate reports in Power BI Desktop, the actual dashboard creation and tile pinning are done in the web service. This distinction is crucial for understanding where and how the different components of Power BI are used.

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3. **Viewing and Sharing on Mobile Devices:** While creation and extensive customization of dashboards are not possible on mobile devices, Power BI mobile apps do allow users to view and interact with dashboards. This includes sharing dashboards with others, making it convenient for decision-makers to access key metrics on the go.

4. **Standalone Tiles:** Beyond pinning existing visualizations from reports or datasets, Power BI allows for the creation of standalone tiles directly on the dashboard. These can be used to add various types of content such as text boxes, images, videos, streaming data, and web content. The ability to add such diverse elements makes dashboards more functional and engaging, enhancing the storytelling aspect of the data.

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5. **Add Tile Control:** This feature in Power BI is particularly useful for customizing the dashboard layout. Using the "Add tile" control, you can directly insert these standalone content pieces onto your dashboard, which can be positioned and resized according to your visual layout preferences.

In summary, tiles are a fundamental component of Power BI dashboards, serving as the building blocks that allow data analysts and business users to visualize and interact with key information effectively. The flexibility in creating and arranging tiles ensures that dashboards can be tailored to meet specific business requirements and user experiences.

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1. **Pinning a Tile:** We've accurately listed several sources from which tiles can be pinned to a dashboard in Power BI. These sources include:
   - **Power BI Q&A:** This allows users to ask questions in natural language, and the answers can be pinned as tiles.
   - **Reports:** Visualizations from any report can be pinned as tiles.
   - **Another Dashboard:** Tiles from one dashboard can be pinned to another.
   - **Excel Workbook on OneDrive for Business:** Integrating Excel data that's hosted on OneDrive for Business directly into your dashboard.
   - **Quick Insights:** Auto-generated insights from data that can be pinned as tiles.
   - **On-Premises Paginated Reports:** Reports hosted on Power BI Report Server or SQL Server Reporting Services (SSRS) can also be pinned as tiles.

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2. **Creating Standalone Tiles:** Standalone tiles are those that are not directly linked to dynamic report data but include static content such as images, text boxes, videos, streaming data, or web content. This can be done using the 'Add tile' control on the dashboard, providing greater flexibility in dashboard customization.
3. **Interacting with Tiles:**
    - **Moving and Resizing:** Tiles can be easily moved and resized on the dashboard to suit the visual layout that best conveys the data story. Users can drag and drop tiles and use resize handles to adjust their dimensions.
    - **Changing Appearance and Behavior:** The appearance and interactive behavior of tiles can be modified, depending on how the tile was created and what content it displays.

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4. **Selecting a Tile**: What happens upon selecting a tile can vary:
    - If the tile was created from a report or data question, selecting it might navigate the user to the detailed report or data source for deeper analysis.
    - If it's linked to an Excel workbook or a Reporting Services report, selecting the tile would open those respective sources.
    - If the tile has a custom link, selecting it will take the user to that specified link, providing a tailored interactive experience based on the dashboard designer's setup.

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In summary, the functionality of pinning and interacting with tiles in Power BI dashboards is designed to provide users with a highly customizable and interactive environment. This enables effective visualization and straightforward navigation to underlying reports or data sources, enhancing the analytic and decision-making processes

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These new resources can help us with creating a Power BI dashboard from a report:

1. **Power BI Project End to End for Beginners (2023) -** This complete project tutorial will guide you through the steps of dashboard creation in Power BI, ideal for beginners looking for a comprehensive walkthrough. Watch it here. (https://www.youtube.com/watch?v=j4xlVLgsmNQ)
2. **Make a Power BI Dashboard in 15 Minutes -** If you're looking for a quicker tutorial, this video demonstrates how to create an interactive Power BI dashboard from scratch in just 15 minutes. Watch it here (https://www.youtube.com/watch?v=NISsW-bVAwU).
3. **Power BI Tutorial From Beginner to Pro - Desktop to Dashboard in 60 Minutes -** This tutorial is designed to take you step-by-step from using Power BI Desktop to creating a full dashboard, all within an hour. Watch it here (https://www.youtube.com/watch?v=AGrl-H87pRU).

These tutorials provide us with up-to-date methods and techniques for creating effective and visually appealing dashboards in Power BI.

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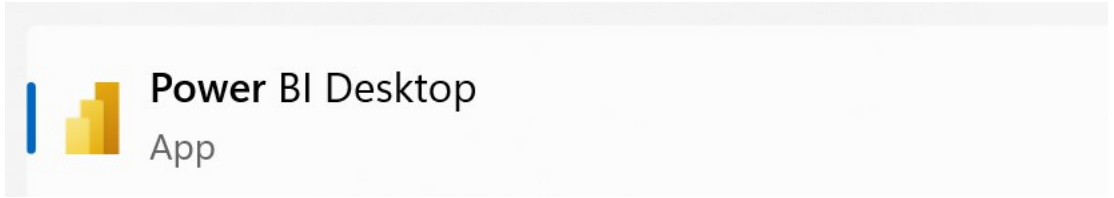
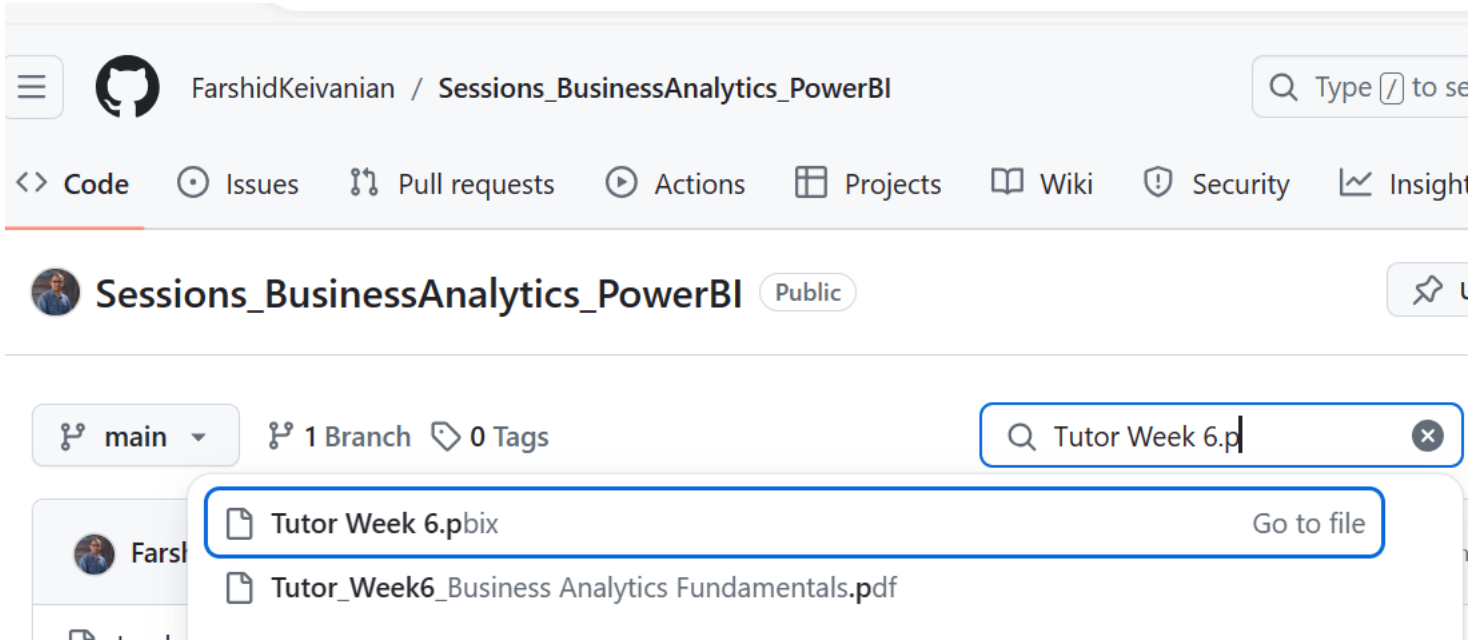
We start by creating a quick and easy dashboard that pins visualizations from a report that's already been built.



- **Run** Power BI Desktop
- **Download and Open** 'Tutor Week 6.pbix'
- **Save it as** 'Tutor Week 7.pbix'



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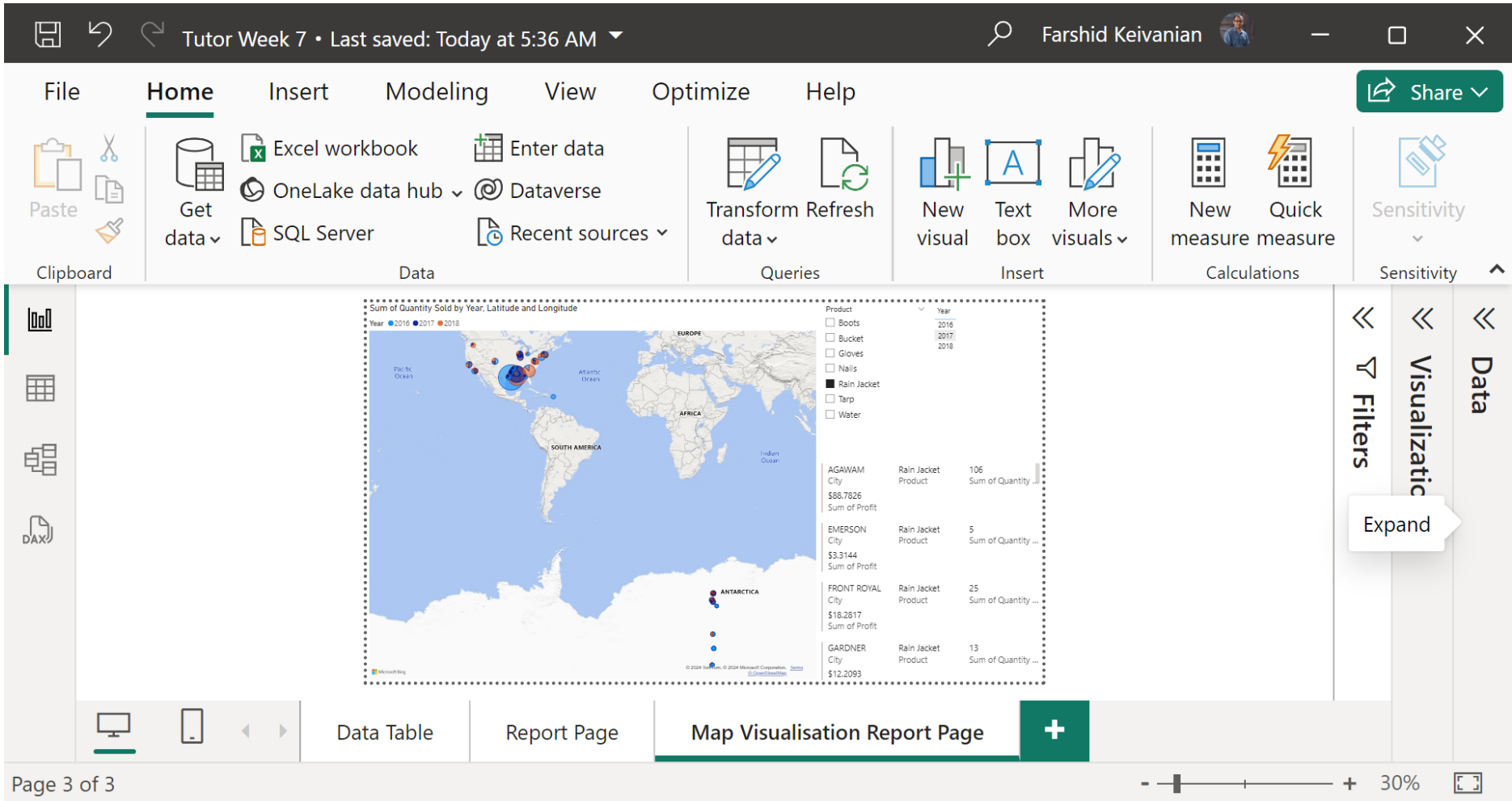
- **Collapse** Visualisations and Data Panes
- **You will see this page**



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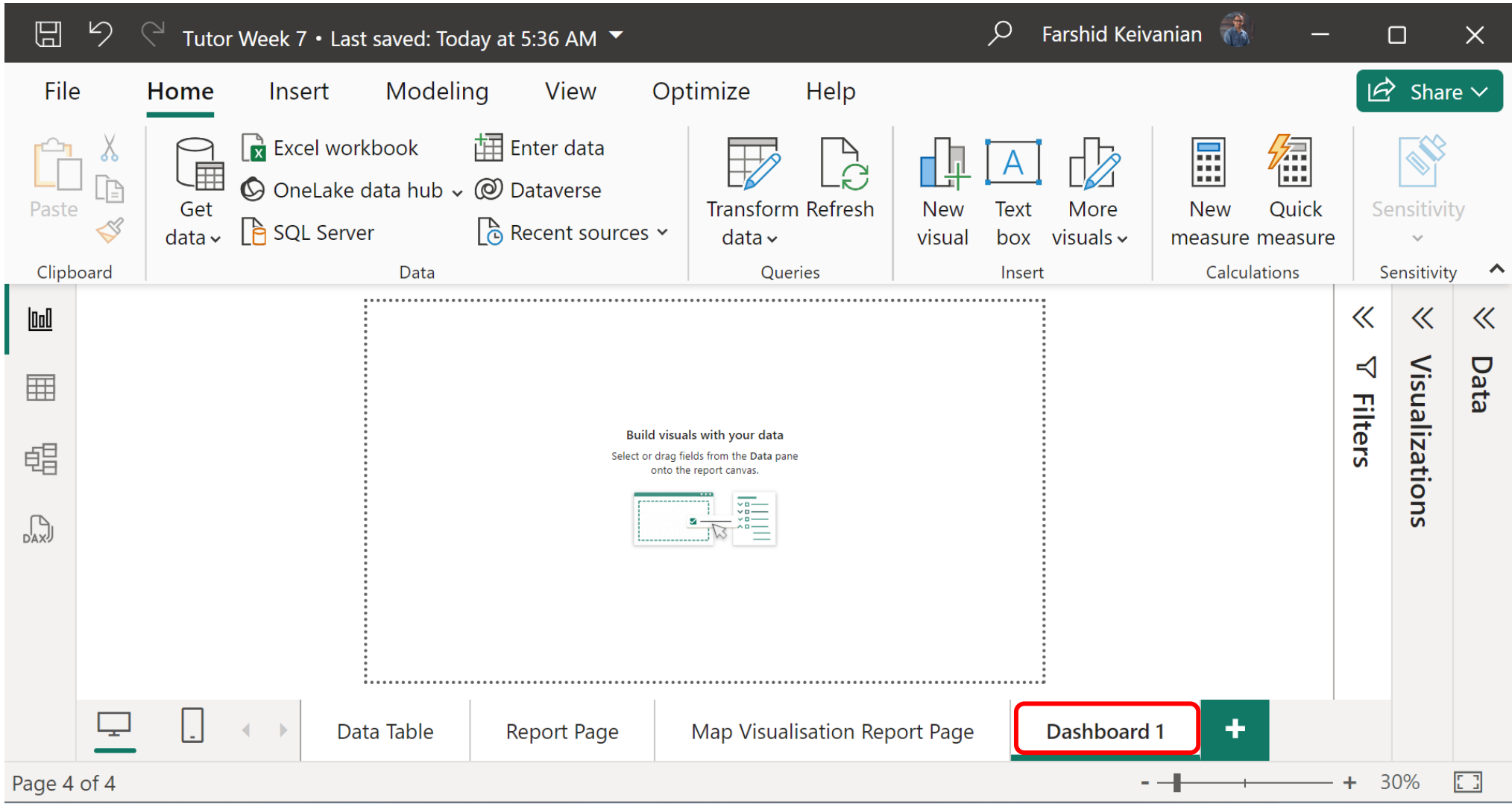
- **Click on +** to create a new workspace
- **Double Click** on it and rename it to Dashboard 1



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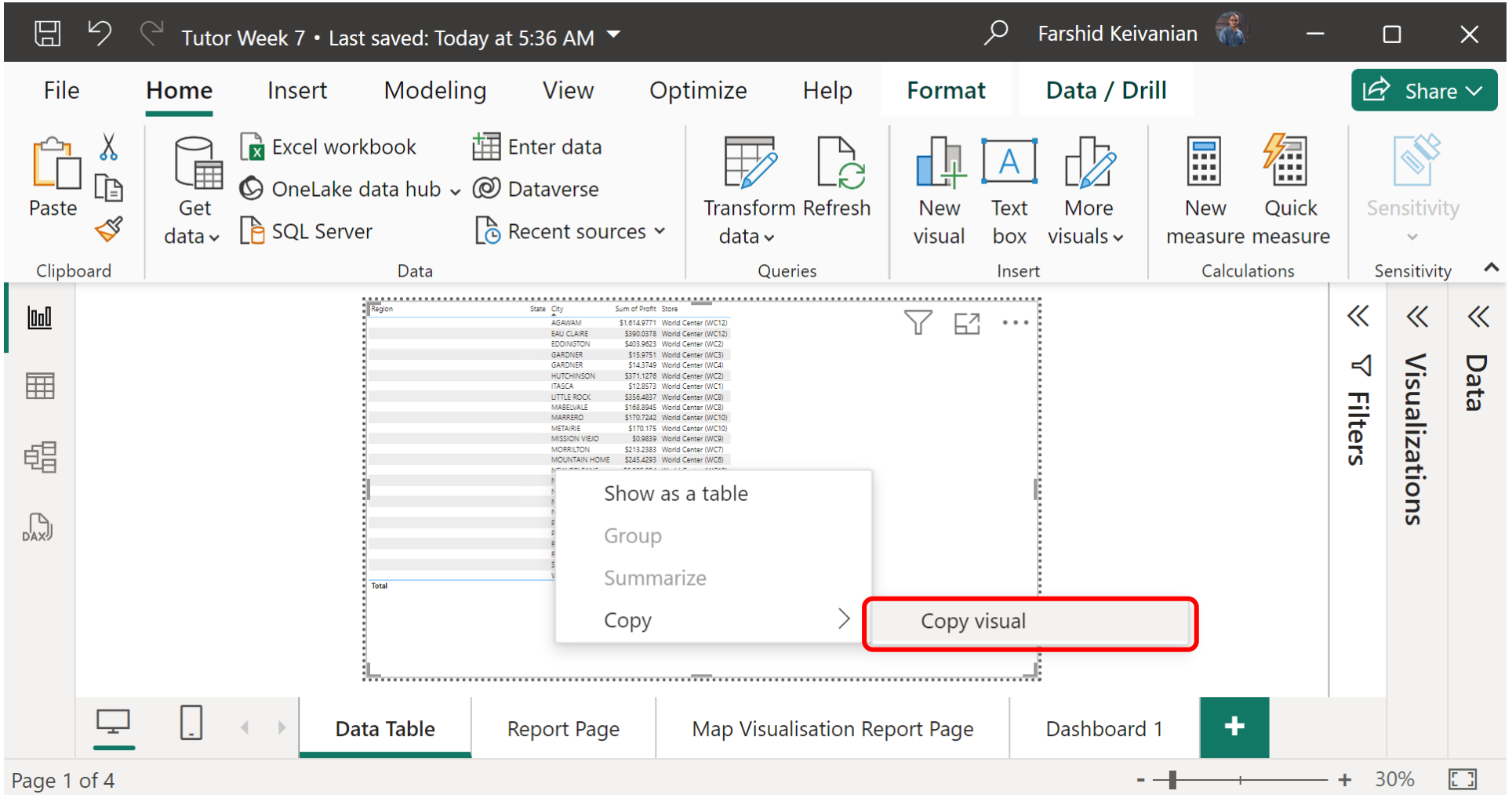
- **Right Click** on Data Table workspace's Visual then **Copy and paste** it n the new workspace, Dashboard 1.



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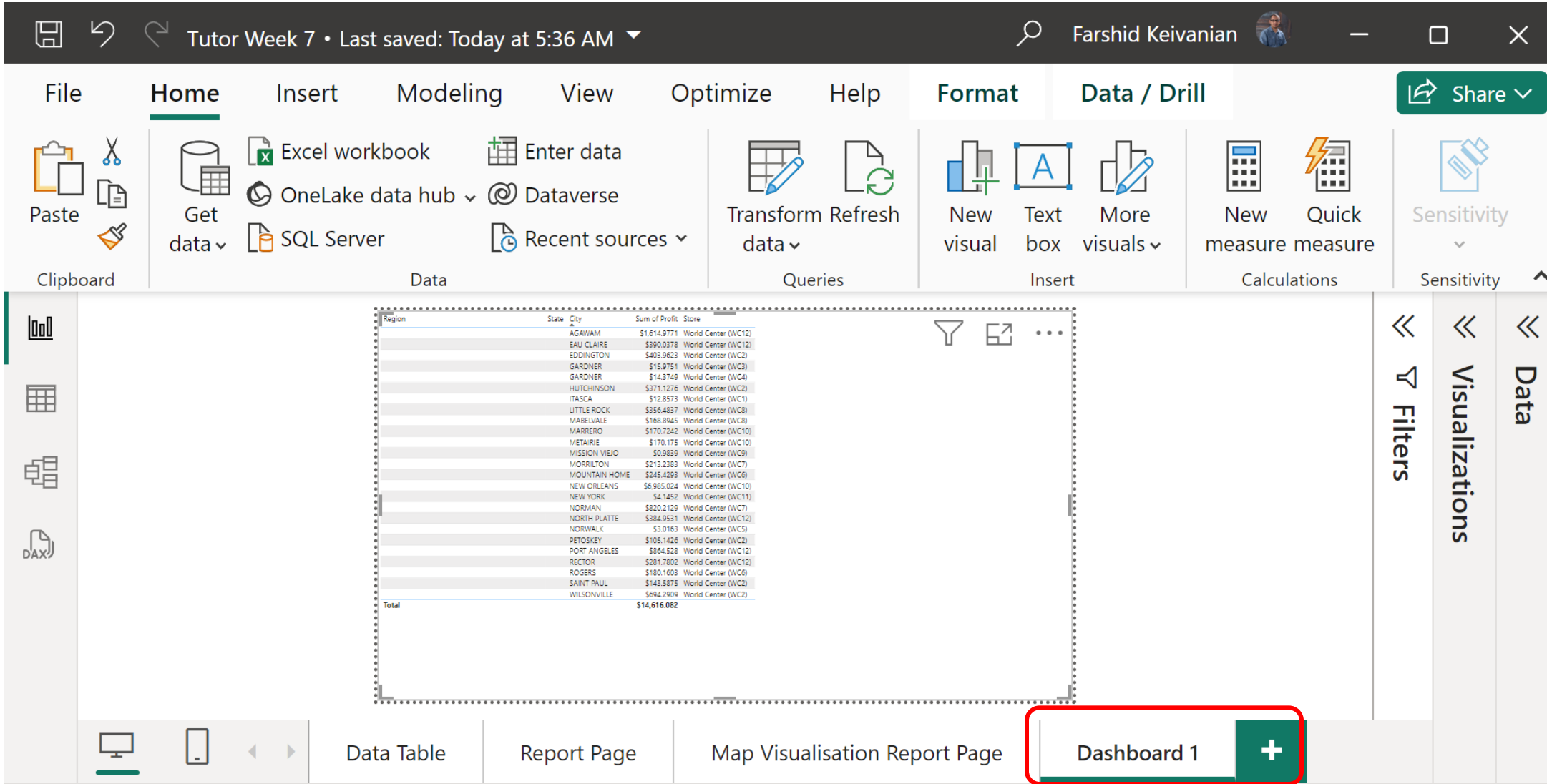

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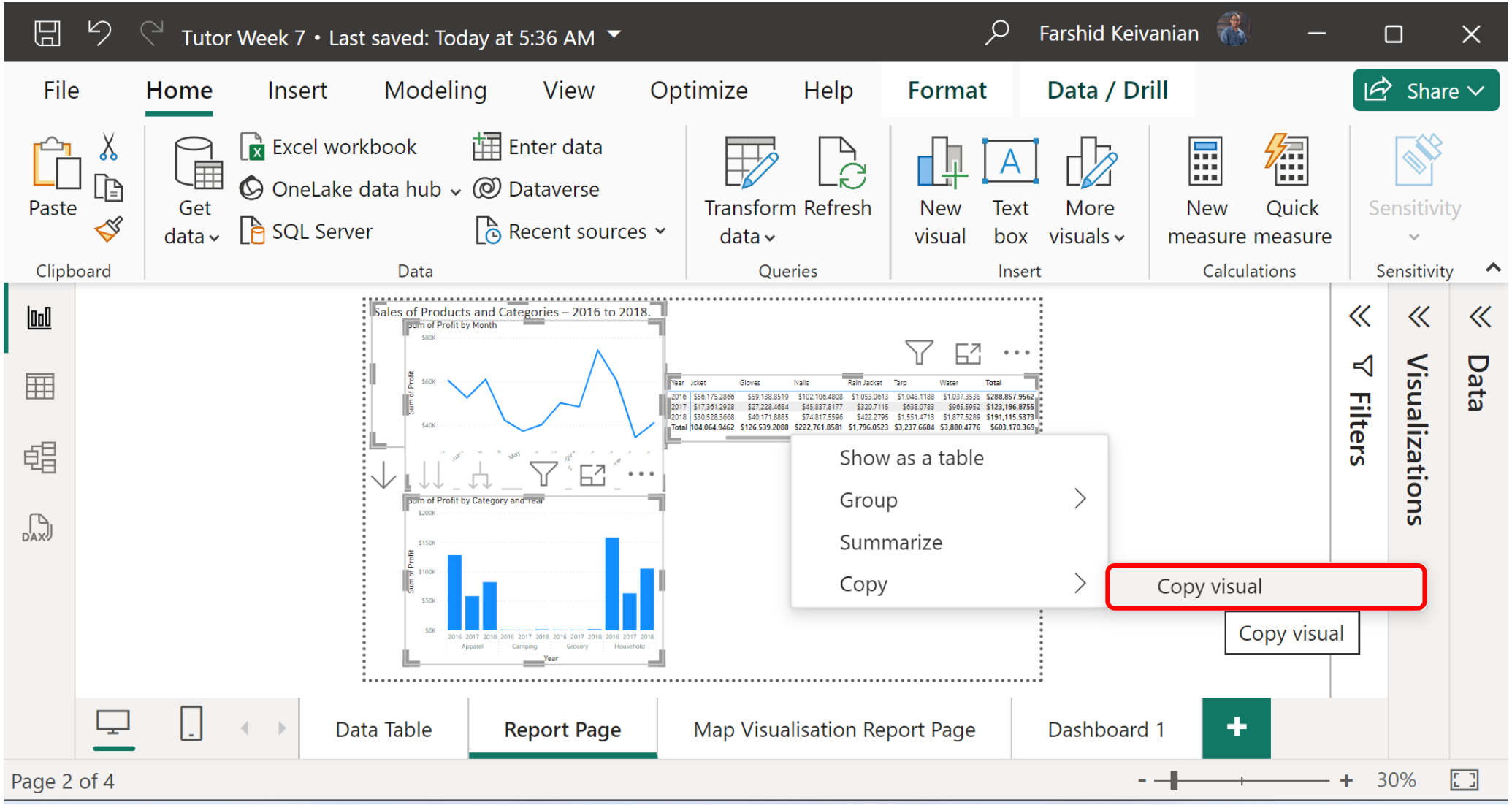
- **Select All in the Report Page, Copy and Paste** them in the new workspace, Dashboard 1.



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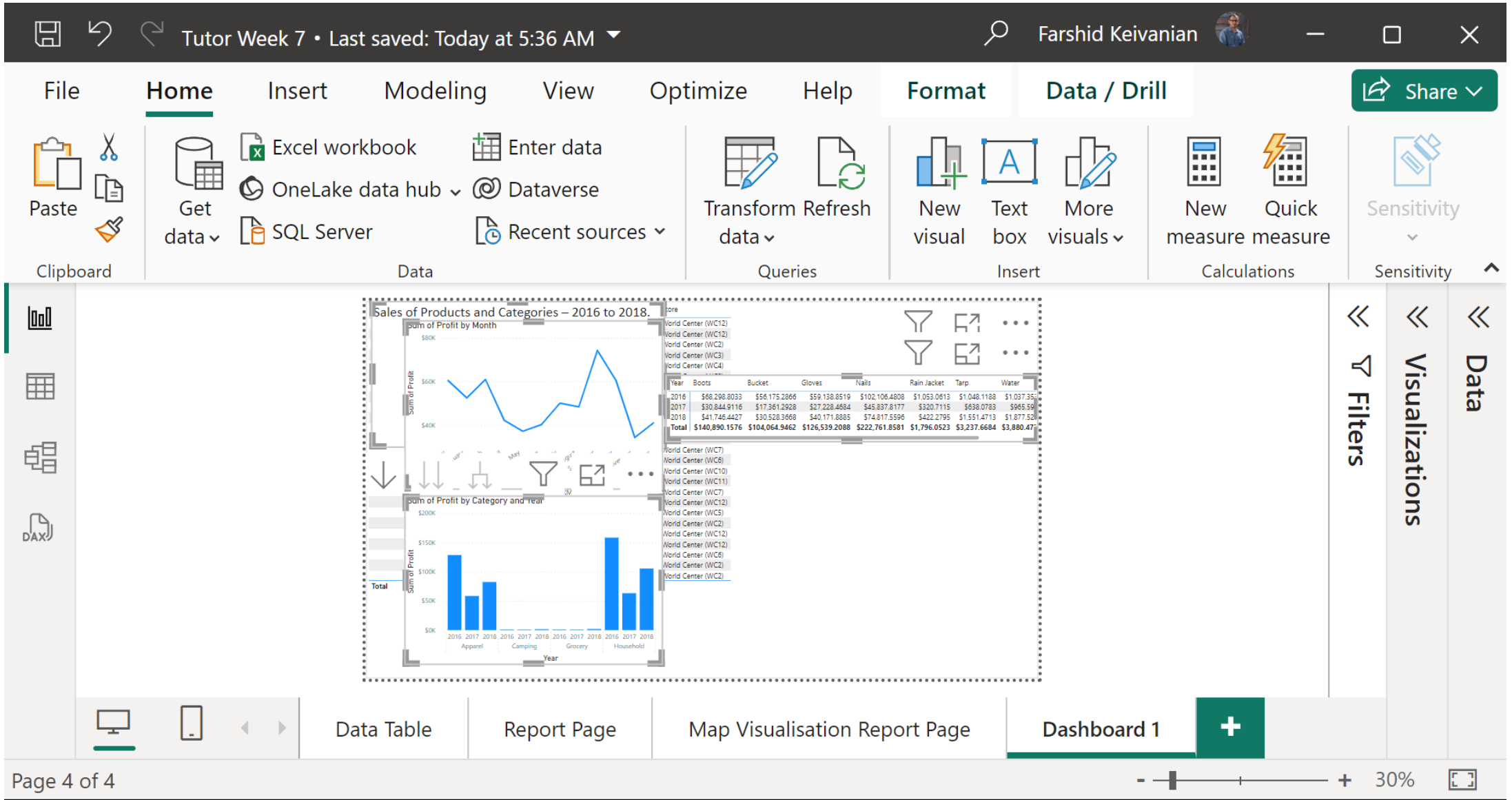

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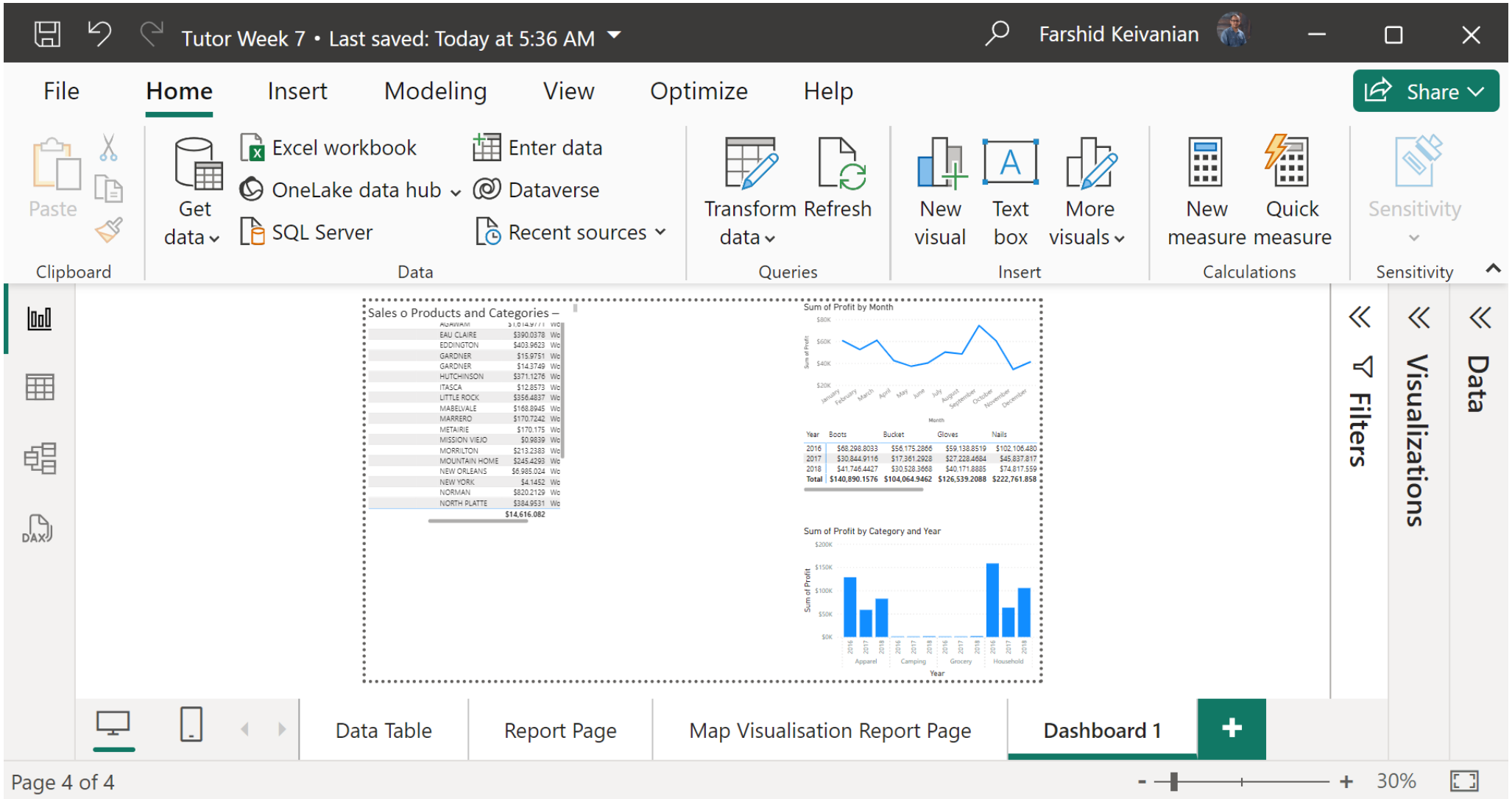
- **Resize them like this**



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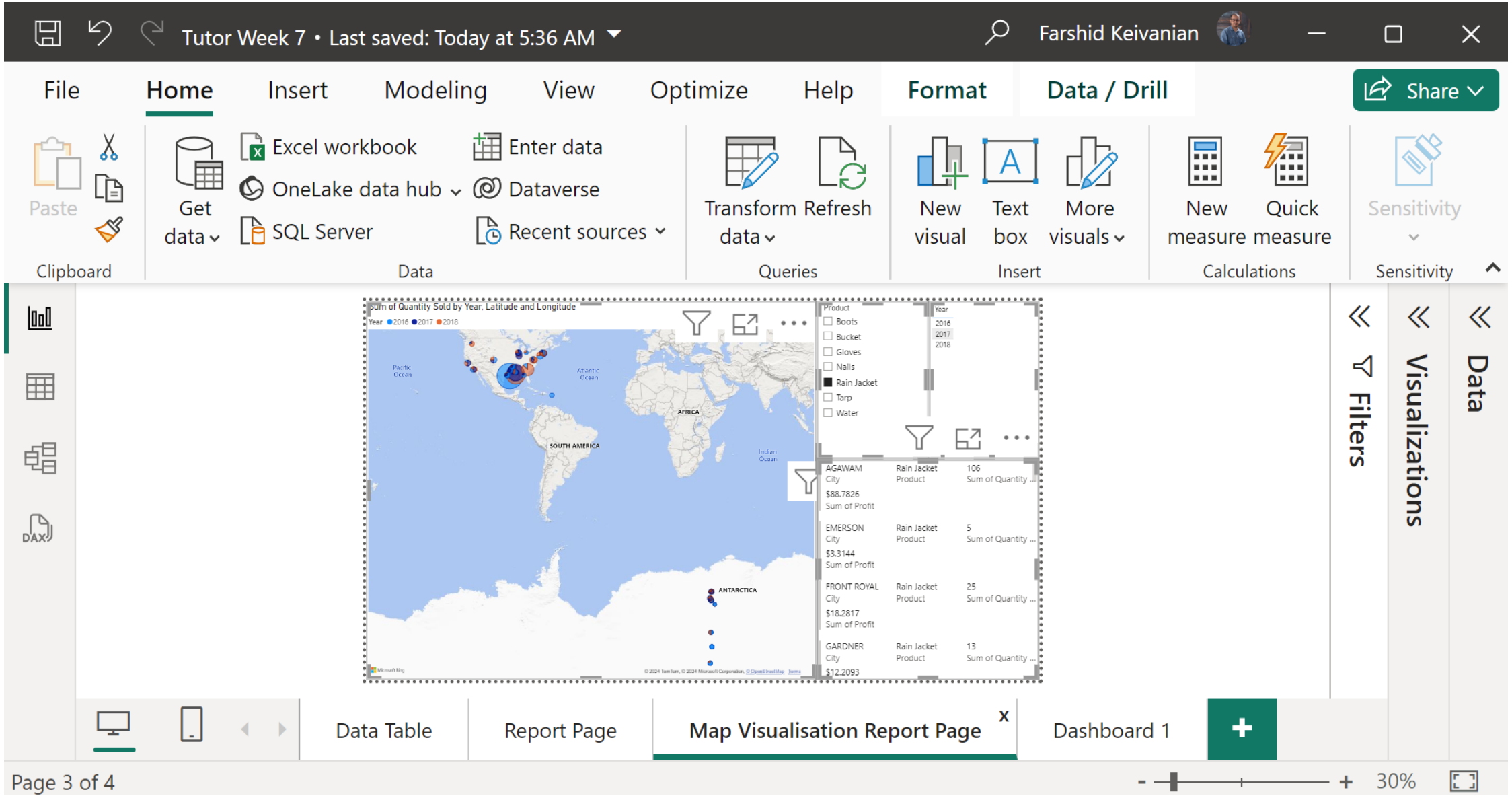
- **Click on** Map Visualisation Report Page and **Select All** and **Copy** them



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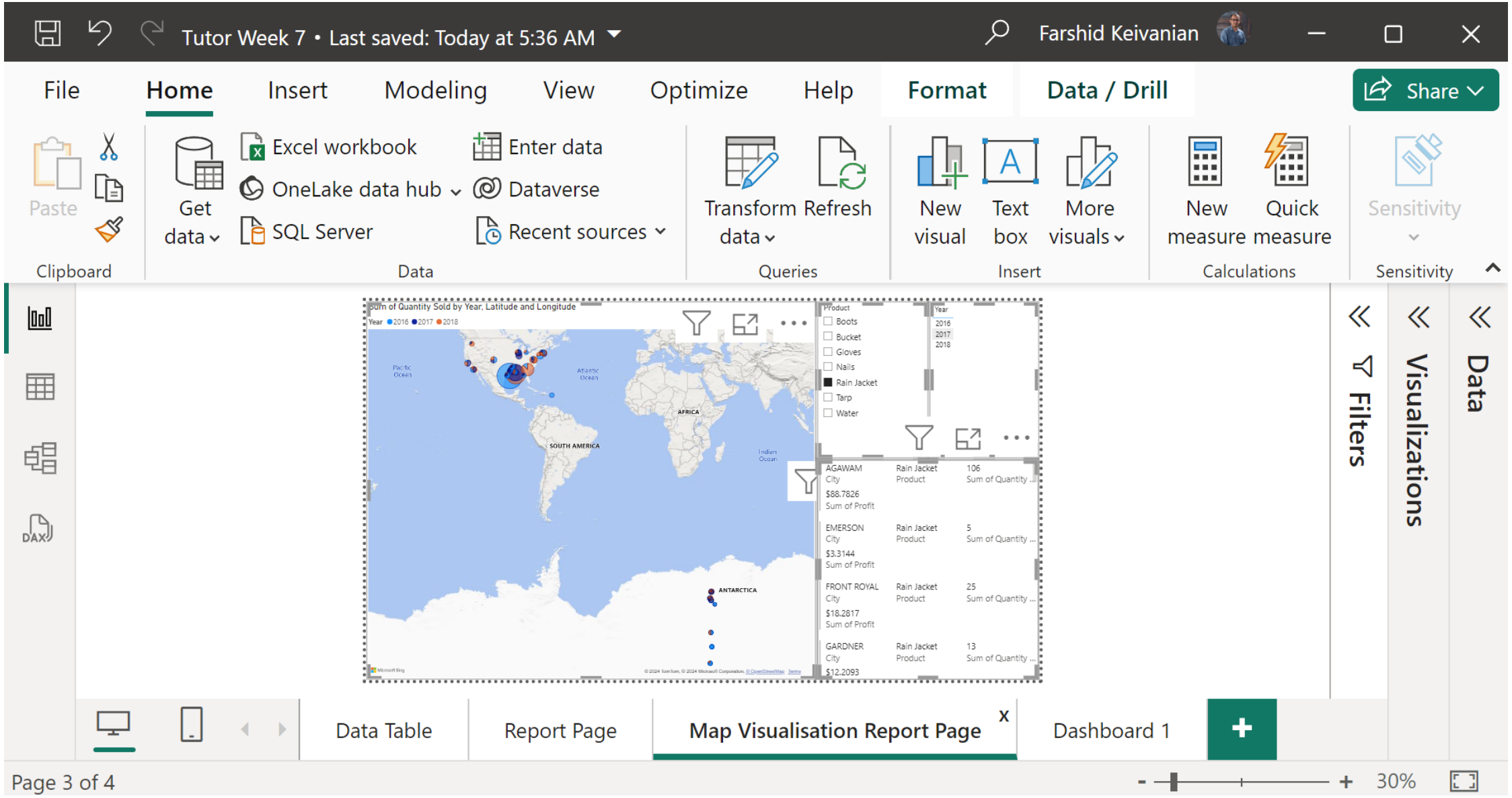
- **Paste them** to Dashboard 1



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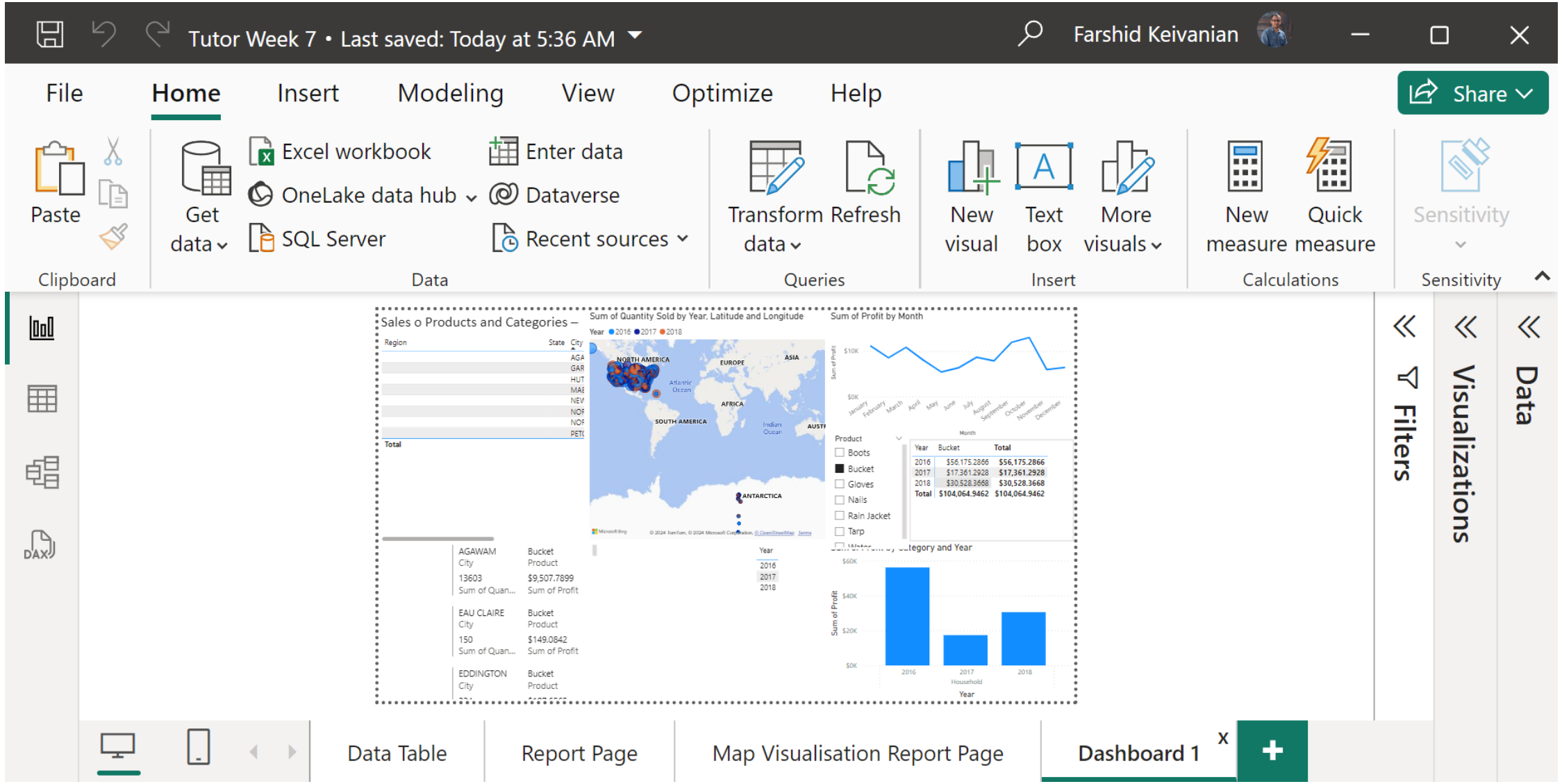
- **Organise the size and positions** of all visual items similar to this in Dashboard 1



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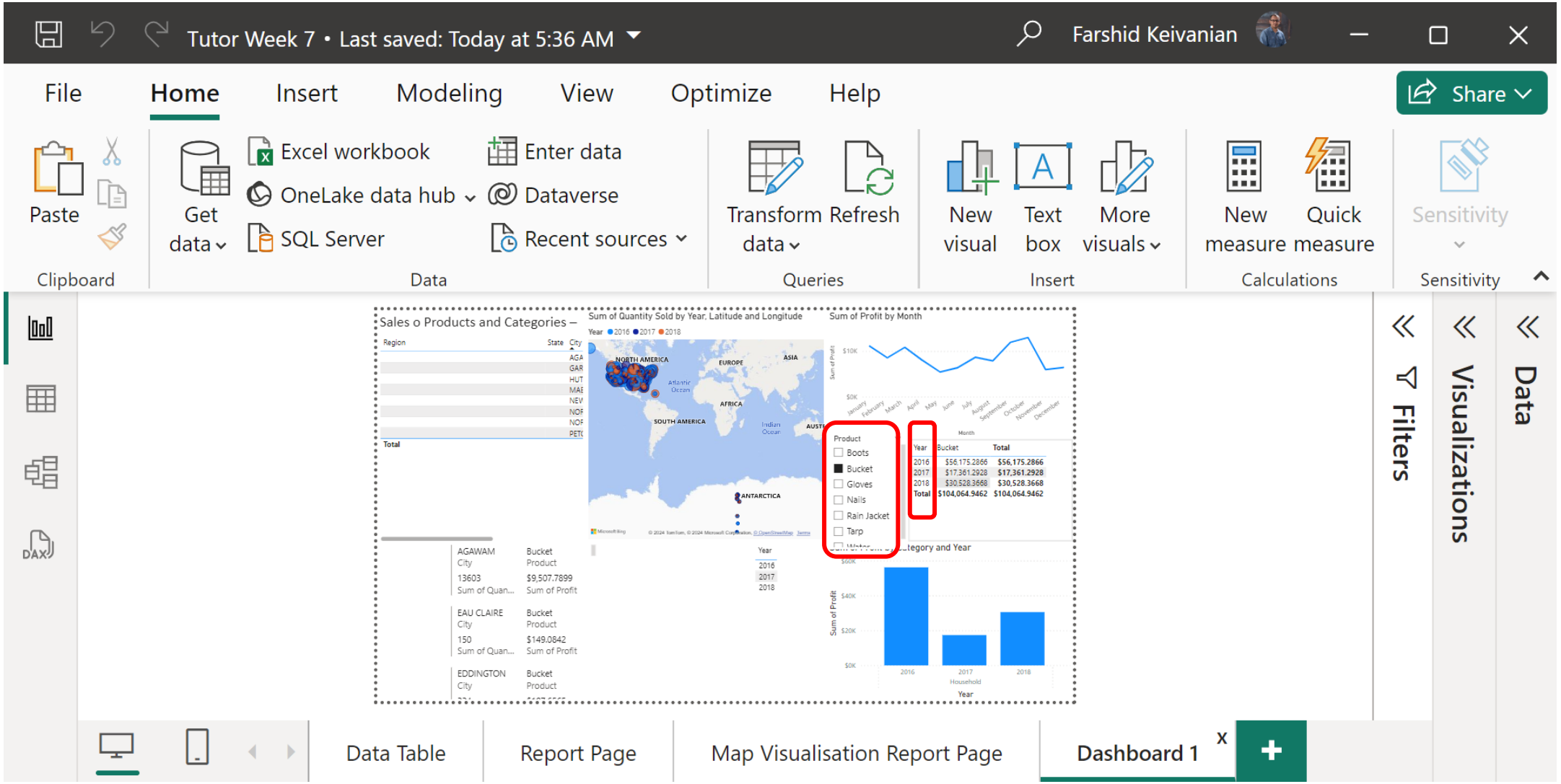
- Now you can Click on each year or each product and see everything in the dashboard filters accordingly



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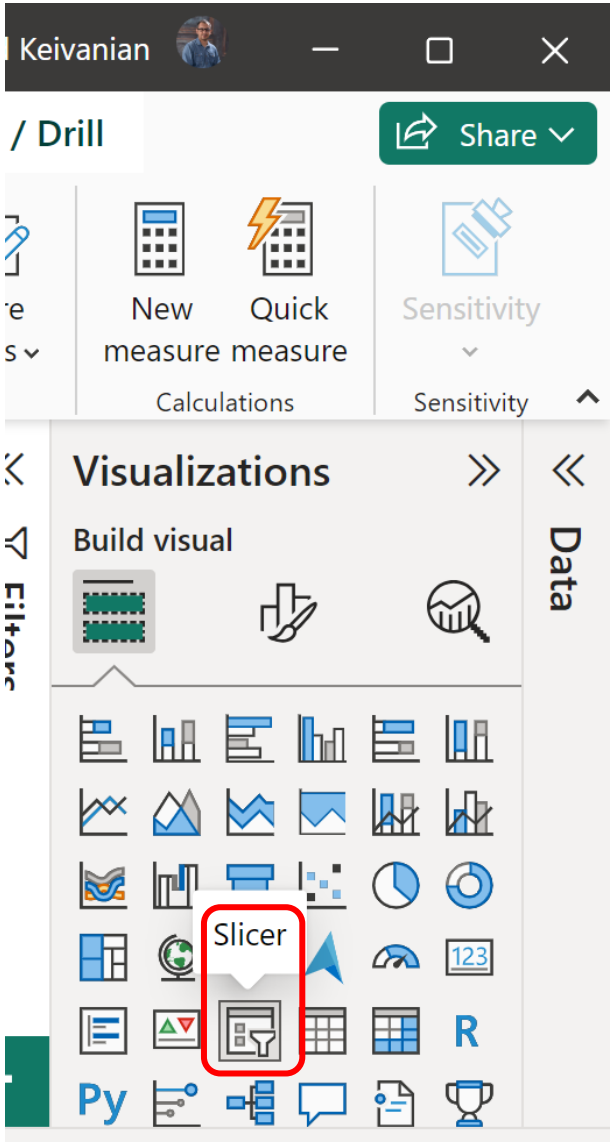
- **Click on Visualisation and Add a Slicer** to the Dashboard 1



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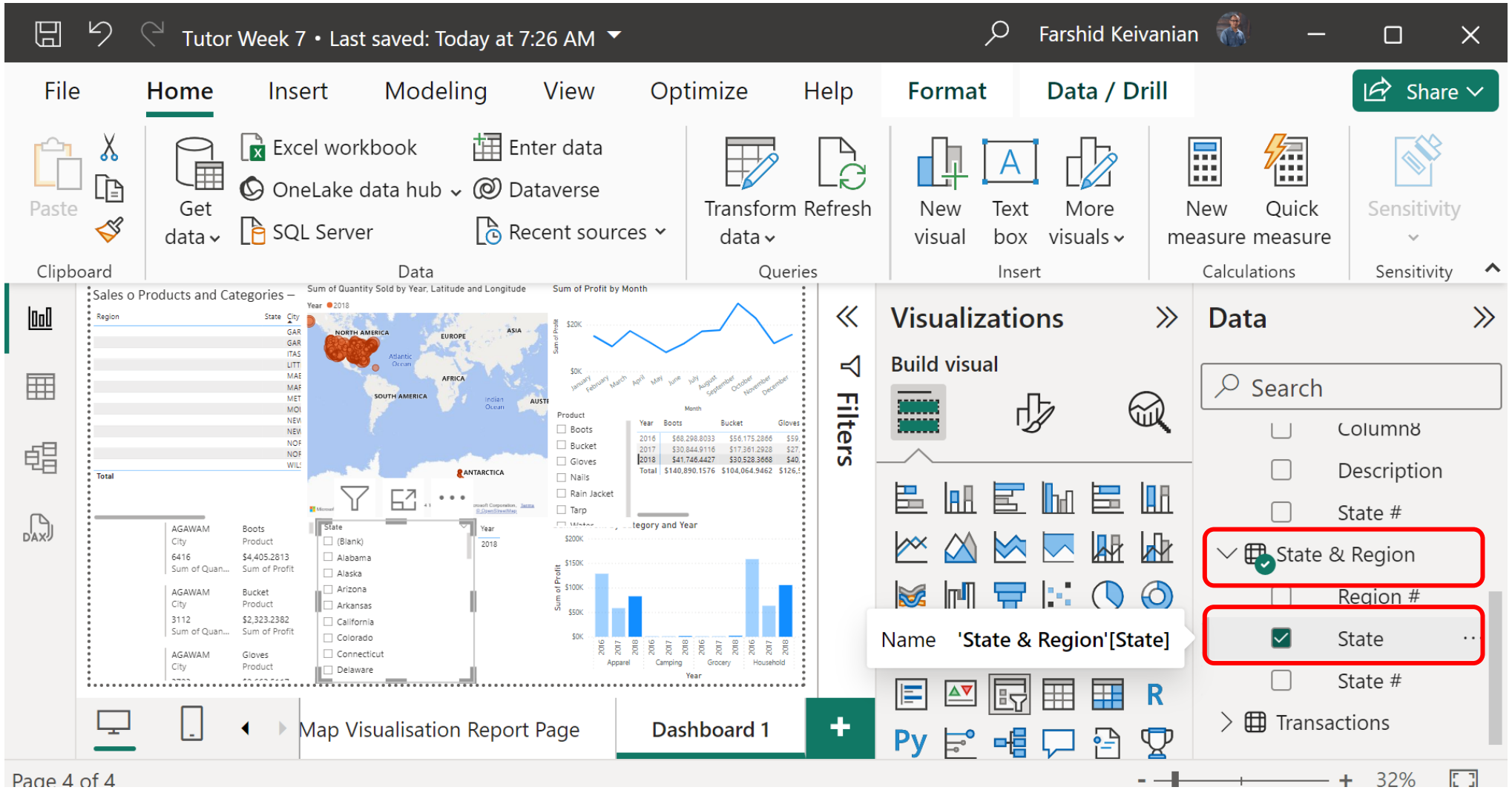
- **Collapse Visualisations and Expand Data Pane** to add different filters to the Slicer
- **Select on the State & Regions and State**



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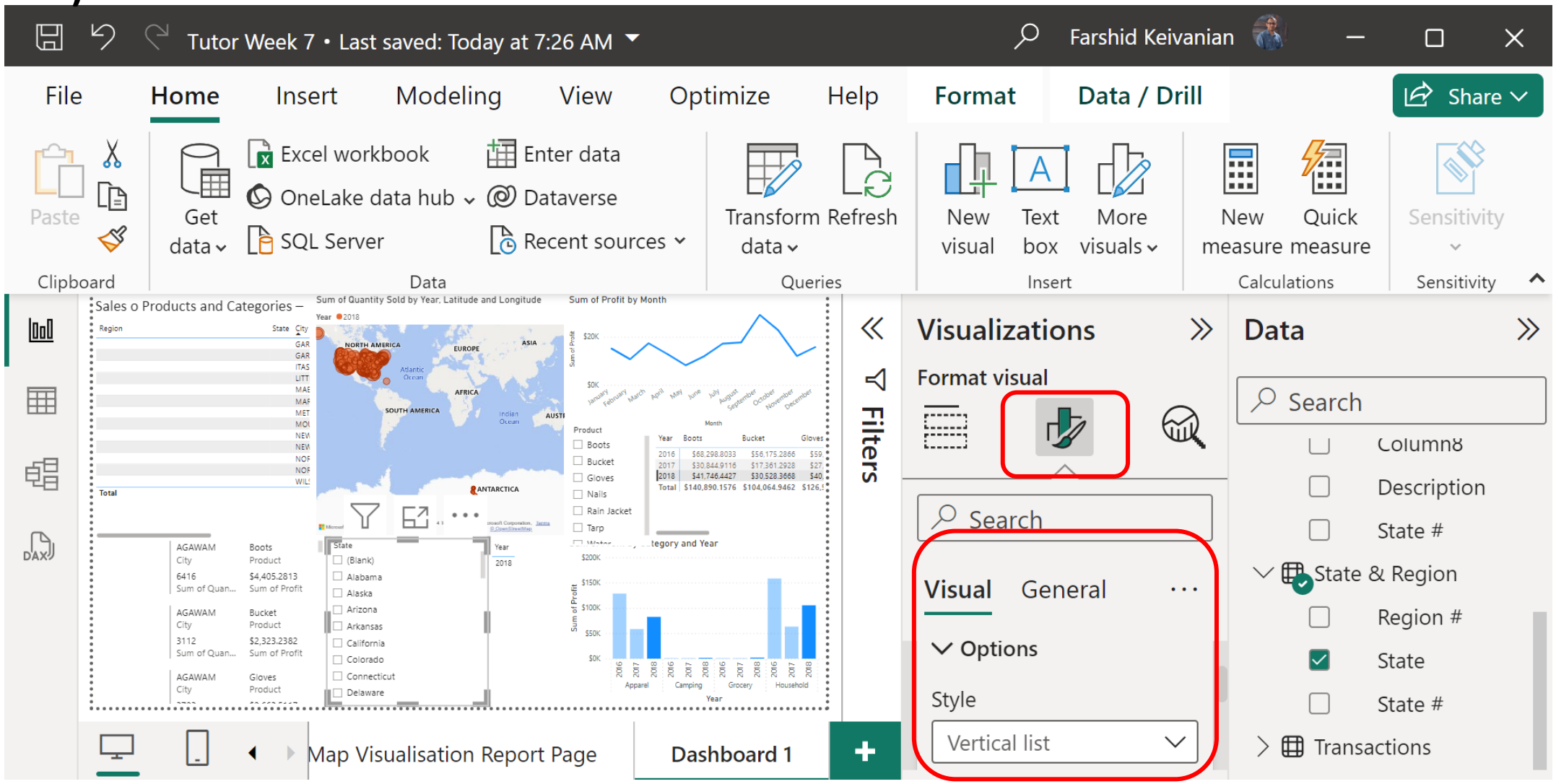
- To customize the style, you can **Select it, Expand Visualisation, and select (Tile, Dropdown, Vertical)**



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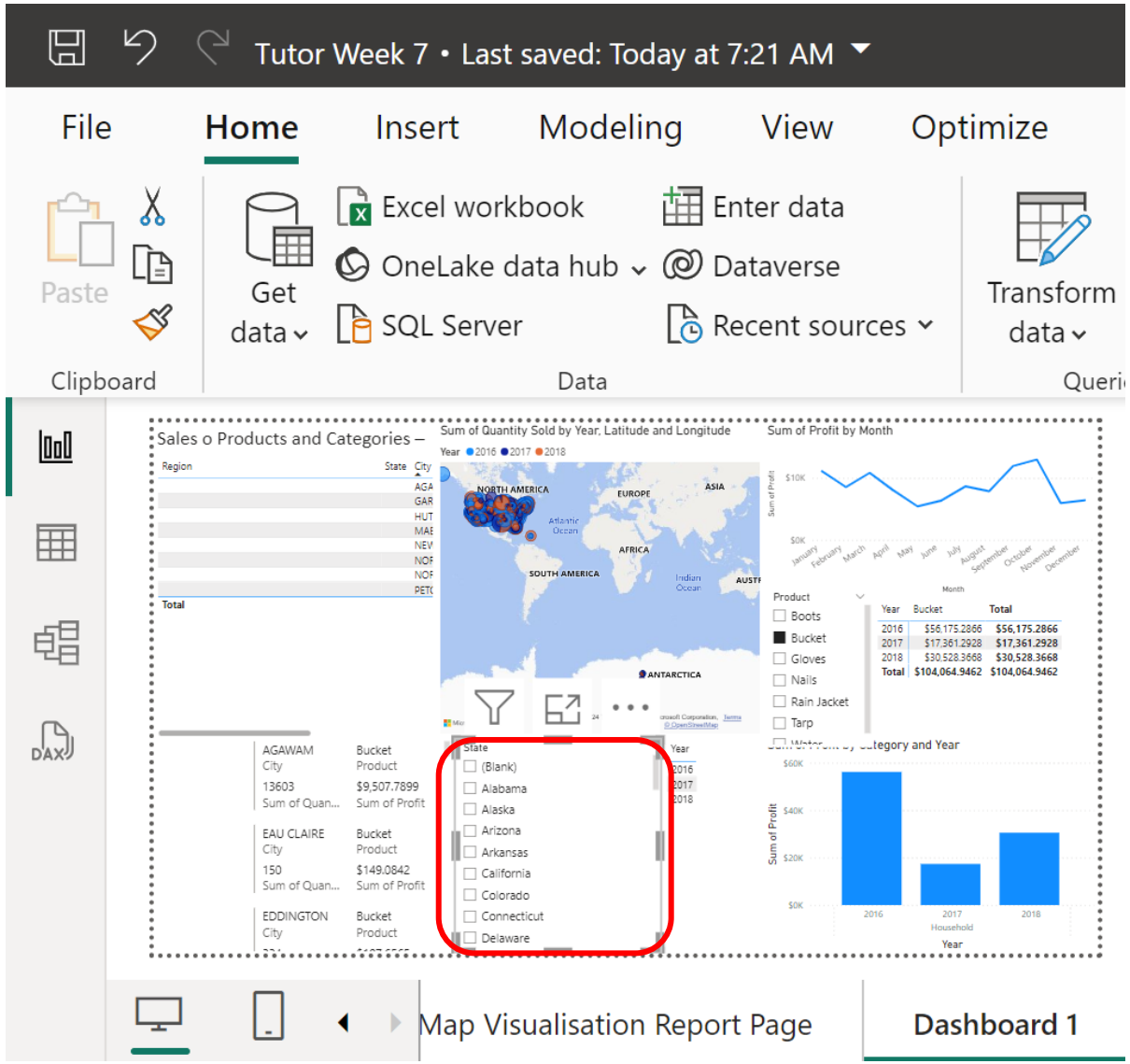
- Now you can **Click On** each state and see everything in the dashboard filters accordingly



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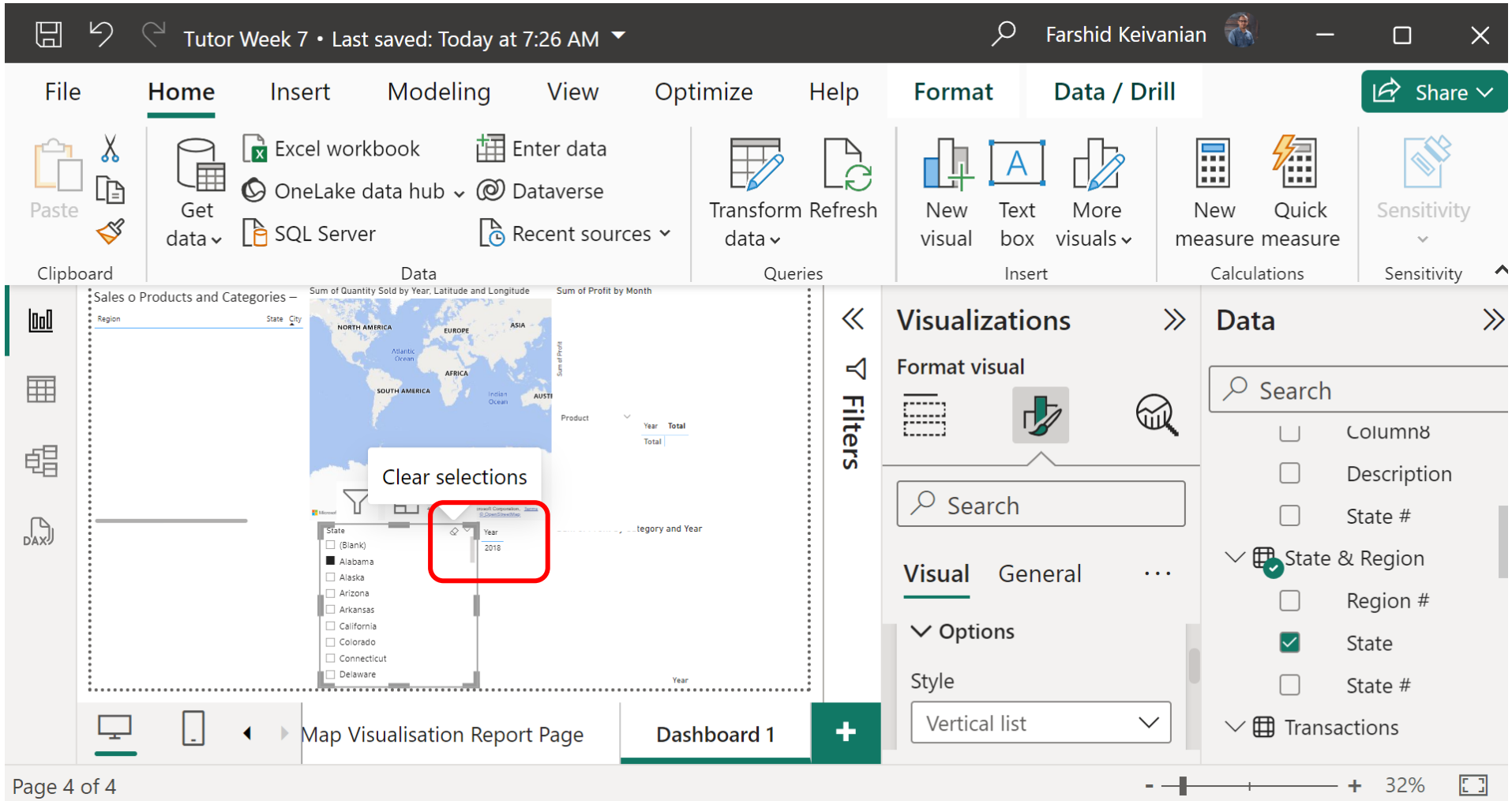
- For removing any selections of the slicer effect, we need to click on the eraser (top right corner):



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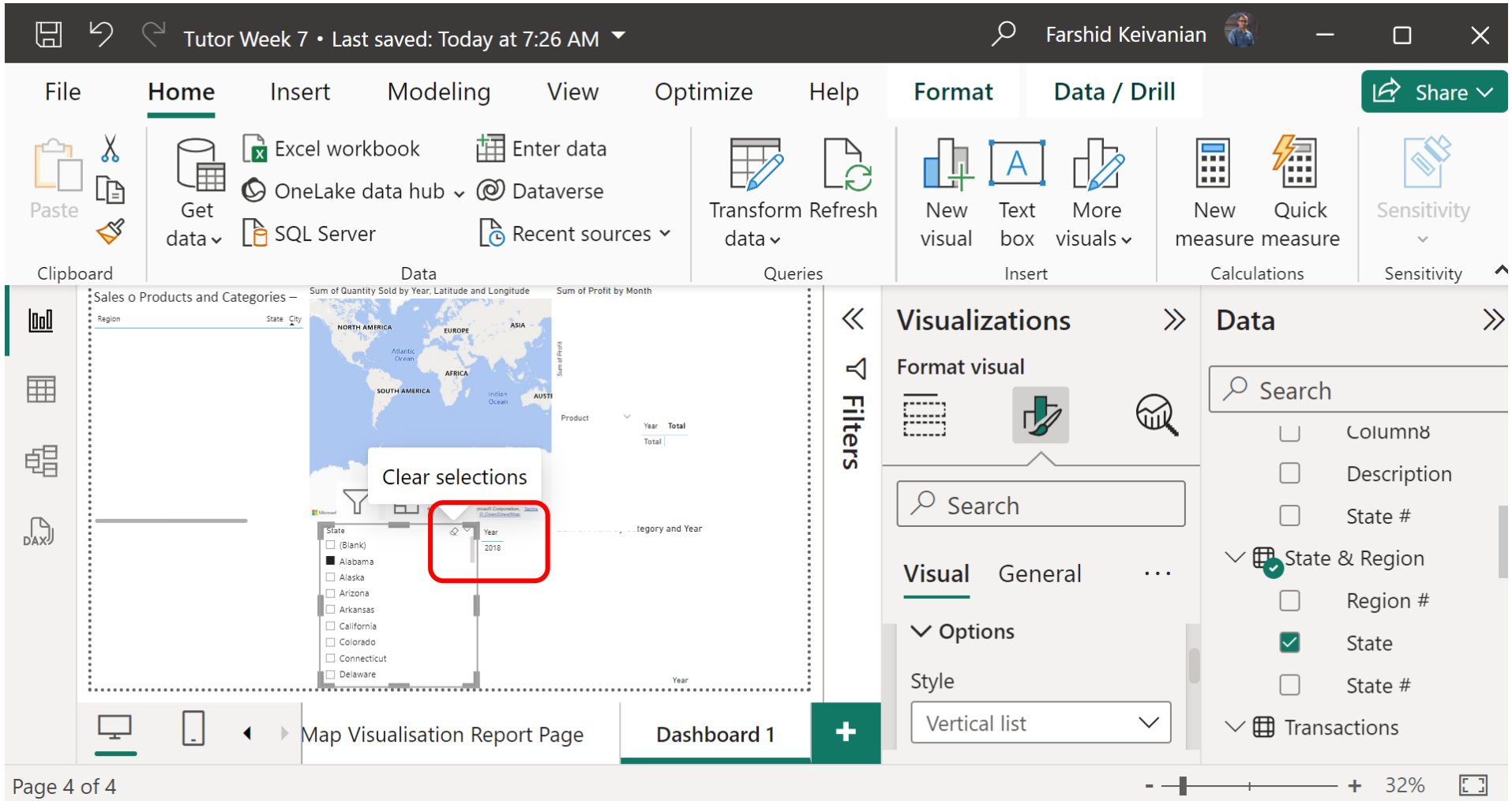
- Please Take a Screenshot of your dashboard and send it to Fkeivanian@my.holmes.edu.au



Attendance & Tutorial Questions - Recognising student participation and engagement specifically identifying those who are most actively involved!

Thank you,
Happy a Learning Day