Tutorial and Lab

Data Science Technology and Systems

Week 6

Learning Objectives

By the end of this tutorial, you should be able to:

- Use Tableau for connecting to data sources,
- Use Tableau to analyse and explore insights from your data, and
- Use the Tableau to build dashboards.

Pre-requisites and Installation

- You will need to download and install Tableau desktop as shown in the lecture of week 6
- Use the data uploaded on canvas under week 6

Exercise 1

1- Download the data folder from the data uploaded under week 6

2- Open the Tableau desktop software and connect it to the “Red30TechData.xlsx” data file

3- Add a calculated field for the total sales, which is the (Quantity * price), then show the total sales for each region

4- Add a new worksheet to the open workbook, and generate a table that summaries the sales of each category and quarter

5- Duplicate the previous worksheet and turn the table summary into a proper visualization from your selection. You can be guided by “guide me” toolbox

6- Create a summary table that shows the minimum, maximum, median, and total of the sales for each region

7- Create a dashboard with all the created views/sheets added into it

8- Write down the insights that you can generate from this dashboard

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Exercise 2

1- Open a new workbook, and name it a “leadership activity analysis”
2- Connect this workbook with the leadership activity data in the downloaded data folder
3- Create a sheet for each of the following tasks:
    - Extracting the enrolment of the participants by gender
    - Extracting the enrolment of the participants by age
    - Extracting the enrolment participants by disadvantage status
4- Create a dashboard that include all these sheets.

Exercise 3

1- Use the data named “clusterdata.xlsx” from the downloaded data and connect it a new Tableau workbook

2- Build a scatter plot (or any other graph type) to inspect the relationship between the individuals’ income and their total sales

3- Can you create a cluster analysis for the above plot?

4- How about if you changed the automatic number of clusters to 3-10 range?

5- Write down a summary of your reflection on the output of the analysis

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Exercise 4

1- Create an account on the Tableau public server.
2- Upload all your dashboards and vises and share it with the others on Tableau public.

Thank you!
