

TABLEAU_EU_US_In Class_Session1

TABLEAU_EU_DS12_S1

Training Clarusway

Pear Deck - October 12, 2022 at 6:04PM

Part 1 - Summary

Use this space to summarize your thoughts on the lesson

Part 2 - Responses

Slide 1



Data Visualization with Tableau
Session 1



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Your Response

Did you complete the pre-class activity?



Pear Deck

Students, drag the icon! □

Pear Deck Interactive Slide
Do not remove this bar

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Find a word that begins with P as quickly as



RDUPZRZLBFIawezyrgk

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RDUPZRZLBFIWEZYRGK

RDUPZRZLBFI~~A~~WEZYRGK

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RDUPZRZLBFIWEZYRGK

RDUPZRZLBFI~~A~~WEZYRGK

RDUPZRZLBFI~~A~~WEZYRGK

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Some visual cues that pop out at us without conscious effort



COLOR HUE



ORIENTATION



TEXTURE



POSITION & ALIGNMENT



COLOR BRIGHTNESS



COLOR SATURATION



SIZE



SHAPE

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+ab|eau°

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- ▶ Getting Started with Tableau Desktop
- ▶ Basics of Tableau
- ▶ Connect to Data with Tableau
- ▶ Areas of the Workspace
- ▶ Data Pane

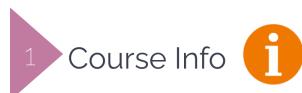
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Course Info

Course Duration

13 Sessions 39 Hours in Total In-Class
4-5 Sessions 4-5 Hours in Total Lab

Course Flow & Level of Course



Course Projects

2 Projects, 3 Assignments

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Course Info

Course Objective

- The students will learn how to implement Tableau Desktop from the very beginning and how to use it to leverage data visualization to make decision making very easy.
- At the end of the course, you will be able to
 - Connect relational databases (MSSQL Server etc), spreadsheets & flat files (excel, txt, csv, google sheets), geofiles, pdf files and create interactive, functional and visually appealing dashboards and reports.
 - Easily adapt other BI tools such as Power BI, Data Studio, Looker
 - Start to apply data analysis and BI related jobs with %95 self-confidence level.

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► Objective



- Define what Tableau and Business Intelligence
- Install Tableau Desktop and Tableau Public
- Describe the areas of the start page
- Describe the areas of the data source page
- Connect to an Excel file

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► BUSINESS INTELLIGENCE



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way to success revealed

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▶ How to follow the class?

- Don't try to do at the same time with me!!!
- Just listen and pay attention to the details.
- I will give you time to practice.

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Story of Tableau

The Catalyst?

Chris Stello
CO-FOUNDER AND TECHNICAL ADVISOR

A Department of Defense (DoD) project aimed at preventing people's ability to analyze information. Brought to the Stanford University Computer Science department, the project had failed with Chris Stello. He was asked to help with the project and ended up creating Tableau for exploring and analyzing relational databases and data cubes. His early career as a database programmer helped him see the problems he faced with this work. Bringing his project to change the world, he knew this would be better.

Per Ekstrand
FOUNDER OF CLARUSWAY AND CHIEF INVESTOR

The mind behind Pixar

Per Ekstrand
FOUNDER OF CLARUSWAY AND CHIEF INVESTOR

The idea behind Pixar, and today's Big Data, probably fits the definition of what it was a project that could change the world. A founding member of Pixar Animation Studios, Per Ekstrand is a serial entrepreneur and investor. "We create pictures that answer questions, but we do it for businesses that want to know things about their data."

Chris, Per, and a crew of friends built the company graphics could never imagine. They had no money, no experience, and no idea where they brought together two complete strangers together for the first time. They had no idea what they wanted to do with their company, and this is why they became a demanding catalytic force in one of the world's greatest areas of need.

I see the future

Christian Olssen
CO-FOUNDER AND CHIEF INVESTOR

"I see the future" was Christian Olssen's motivation when he saw what potential Tableau had. After working together on a project between starting entrepreneurship at Stanford Business School. Together, Christian, Chris, and Per founded Tableau Software. In 2012, Christian became the first employee hired as CEO. Tableau quickly became one success after another. First, consumers, then enterprises, then governments, and finally Tableau has now expanded to multiple new industries. Tableau is revolutionizing business analytics, and this is why we believe it will continue to do so.

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Tableau Products

Tableau Desktop

Tableau Prep

Tableau Online

Tableau Server

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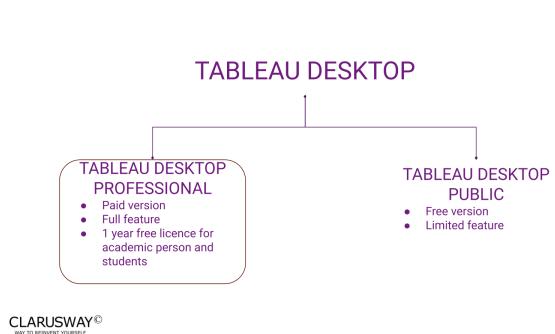
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Use this space to take notes:

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► Why Tableau?

Gold Standard in Visual Analysis



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▶ What is a dataset?

In the context of Tableau, a data set (sometimes called as a data source, or database) contains the data used to build visualizations. Every chart such as line chart, bar chart you see in Tableau has a connected database or spreadsheet that feeds the data.



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▶ Type of Data Sources

There are four different data source type in Tableau you connect to:



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► What is a field?

A field (aka, column or attribute) is a part of a record (or row) and contains a single piece of data for the subject of the record. In Tableau, we don't use term *column*, instead, we use **field**.

employees table						
emp_id	first_name	last_name	salary	job_title	gender	hire_date
17679	Robert	Gilmore	110000	Operations Director	Male	2018-09-04
26650	Elvis	Ritter	86000	Sales Manager	Male	2017-11-14
30840	David	Barrow	85000	Data Scientist	Male	2019-12-12

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► Row-level Record

Row-level record is a very important concept in Tableau. Because it's very important to understand what info a row of data contains. In this way, you'll have more power to ask complex questions to your data.

What does it represent?

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► Row-level Record

Name	Mode_of_Transportation	Days_Per_Week
Brandon	Bus	2
Brandon	Bicycle	3
Arthur	Car	2
Arthur	Bicycle	1
Arthur	Walk	2
Isaac	Car	3
Isaac	Bicycle	2

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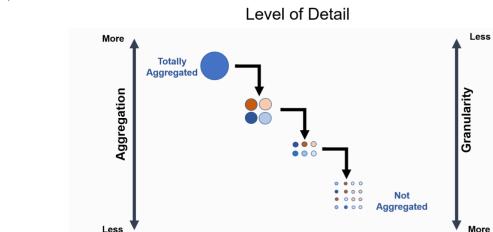
Each row displays the number of days per week a commuter uses a specific mode of transportation to go to work or go back home.

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► Granularity, Level of Detail, Aggregation



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▶ Connect to Tableau ➤

Basic Workflow of Tableau



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▶ Connect to Tableau

Basic Workflow of Tableau



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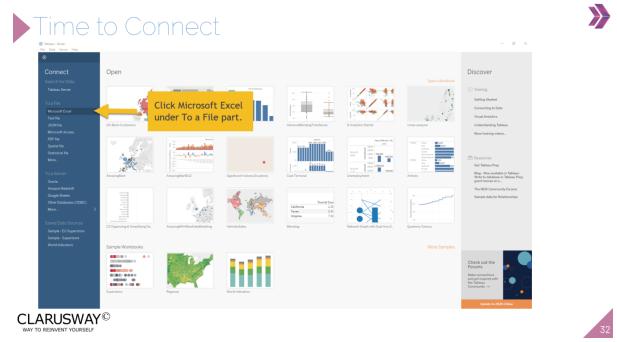
▶ Start Page



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Use this space to take notes:

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The screenshot shows the Data Source Page with a purple header 'Data Source Page'. It features a left pane with a tree view of data sources, a central 'Orders' data grid, and a 'canvas' area. The 'Orders' data grid is labeled 'data grid 3' and contains a table of order data. The 'canvas' area has a large red '2' and the word 'canvas'. The bottom right corner of the slide has the number '33'.

ID	Order ID	Customer ID	Customer Name	Segment
1	CA-2021-02001	OD-00001	Clarie Gute	Consumer
2	CA-2021-02002	OD-00002	Clarie Gute	Consumer
3	CA-2021-02003	OD-00003	Darren Huff	Consumer
4	US-2021-02004	OD-00004	Sarah Howell	Consumer
5	US-2021-02005	OD-00005	Sarah Howell	Consumer
6	CA-2021-02006	OD-00006	Bruce Hoffmann	Consumer

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▶ Data Source Page



This pane shows the connected data source and its details (sheet names, table names), Data Interpreter, Union (this is the same of SQL Union ALL) feature.

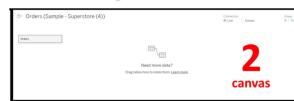


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▶ Data Source Page



Canvas has two layers: logical layer, physical layer. We simply drag and drop the sheet/table names from the left pane to the canvas. The canvas opens with the logical layer. We can create relationships between logical tables. To enter the physical layer, we double-click a table in the logical layer. We can then add joins and unions between tables in the physical layer.



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► Data Source Page ➤

The screenshot shows the 'Orders' data source in Tableau. The 'data grid' section displays the first 100 rows of the data. The columns are labeled: ID, Order ID, Order Date, Product ID, Product Name, Quantity, Ship Date, Ship Mode, Customer ID, Customer Name, and Region. The data grid shows various orders from different customers across different regions.

ID	Order ID	Order Date	Product ID	Product Name	Quantity	Ship Date	Ship Mode	Customer ID	Customer Name	Region
1	CA-2020-002009	03.02.2020	1	Small Widget	1	03.02.2020	Second Class	CG-0201	Clara Giese	Europe
2	CA-2020-002008	03.02.2020	2	Medium Widget	1	03.02.2020	Second Class	CG-0201	Clara Giese	Europe
3	US-2019-000001	31.12.2019	3	Large Widget	1	03.01.2020	Standard Class	US-0001	Steve Johnson	North America
4	US-2019-000002	31.12.2019	4	Medium Widget	1	03.01.2020	Standard Class	US-0001	Steve Johnson	North America
5	US-2019-000003	31.12.2019	5	Small Widget	1	03.01.2020	Standard Class	US-0001	Steve Johnson	North America
6	CA-2019-000002	04.01.2019	6	Medium Widget	1	04.01.2019	Standard Class	BR-0101	Emilio Hoffman	Europe

Data grid displays the first 100 rows of our data source.
Table Details displays the fields in your data source

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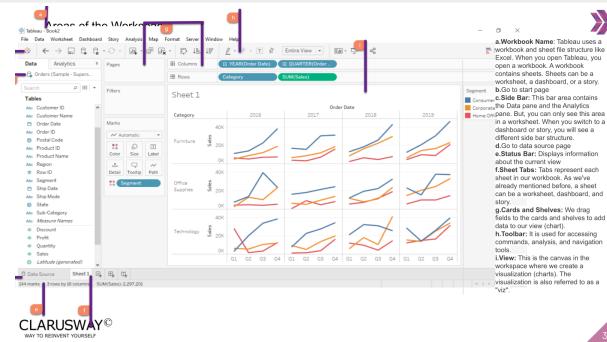
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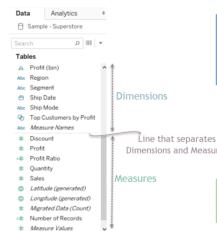
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Data Pane



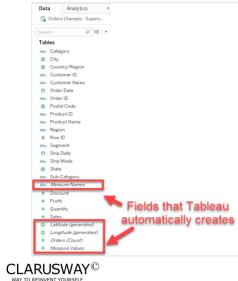
We use **Dimensions** to categorize, segment, break down and reveal the details in our data.

We can apply **Measures** calculations to them and aggregate them

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Data Pane



Measure Names field contains the names of all measures in our data.

Measure Values field contains all the measures in our data. They are aggregated into a single field.

NameofTable(COUNT) field returns the number of records (or the number of rows) for the table.

Latitude (generated) and **Longitude (generated)** fields are generated if your data set has geographical fields.

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Data Types

- All fields in a data source have a data type.
- The data type reflects the kind of information stored in that field, for example integers (410), dates (1/23/2015) and strings ("Wisconsin").
- The data type of a field is identified in the Data pane by one of the icons shown below.



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Data Types

Data type icons and descriptions

Icon	Data type
Abc	Text (string) values
□	Date values
🕒	Date & Time values
✳	Numerical values
TF	Boolean values (relational only)
⊕	Geographic values (used with maps)
☒	Cluster Group

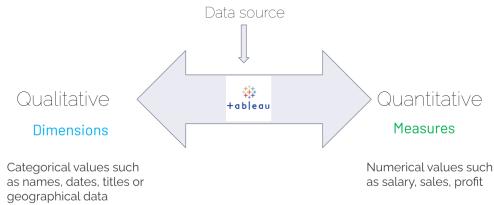
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Dimensions & Measures



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Dimensions & Measures



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Use this space to take notes:

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Your Response

Slide 46

Your Response

ID Number field is dimension.



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► Wrap-up

- What is Tableau?
- Basics of Tableau
- Start Page
- Data Source Page
- Areas of Workspace
- Data Types
- Dimensions and Measures
- Assignment-1



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Your Response

Slide 48

Your Response

Have you understood the Session?

Students, drag the icon!

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THANKS!

Any questions?

You can find us at:

- ▶ #questions-answers @Slack



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