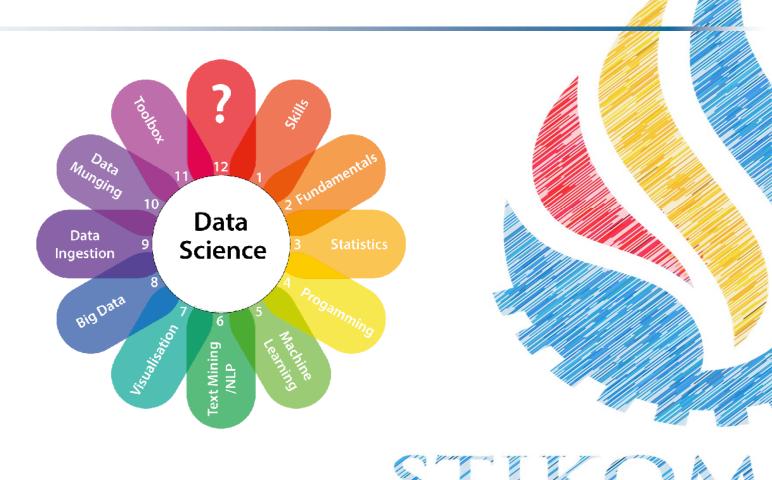


### DATA SCIENCE



# THE BIG 3



vs

**DATA** 



**DATA SCIENCE** 



**DATA ANALYTICS** 

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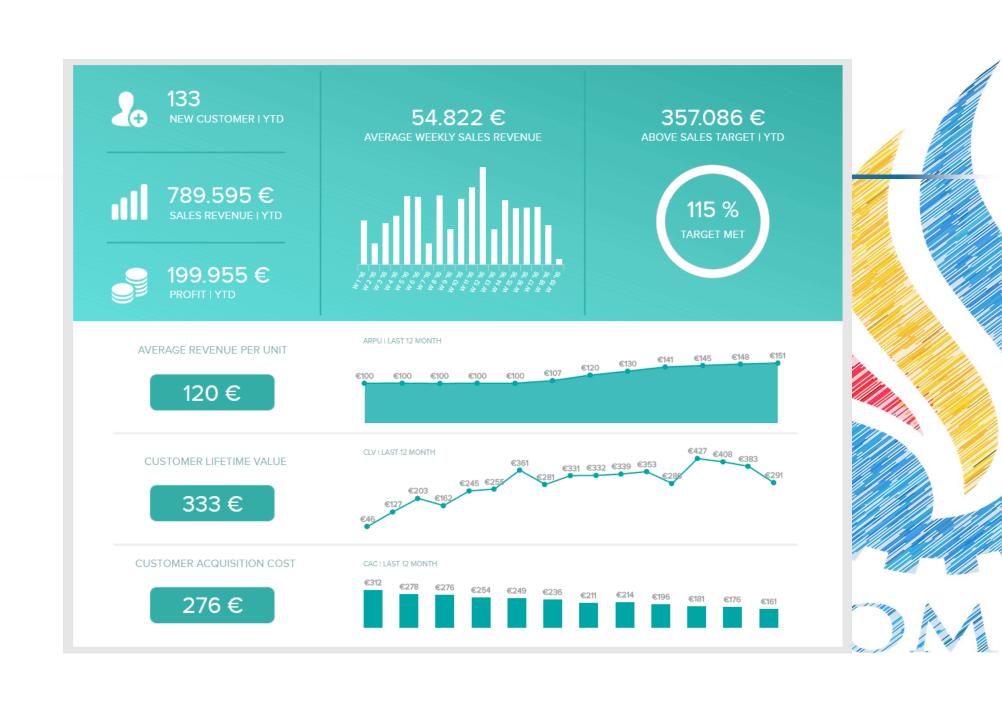
#### DATA VISUALIZATION

- Data Visualization is the process of taking raw data transforming into graphs, charts, images, even videos that explain the numbers and allow us to gain insight of it.
- It Changes the way we make sense of the information to create value of it, discovers new patterns and spot trends.



#### **SALES PLAN TEMPLATE**

FISCAL YEAR START DATE	01/01/2020													
PRODUCT NAME		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
ITEM 1	YEAR PRIOR	\$400.00	\$350.00	\$300.00	\$350.00	\$400.00	\$300.00	\$400.00	\$350.00	\$450.00	\$350.00	\$450.00	\$350.00	\$4,450.00
	SALES GOAL	\$500.00	\$400.00	\$500.00	\$400.00	\$500.00	\$400.00	\$500.00	\$400.00	\$500.00	\$400.00	\$500.00	\$400.00	\$5,400.00
	% OF CHANGE	25%	14%	67%	14%	25%	33%	25%	14%	11%	14%	11%	14%	21%
ITEM 2	YEAR PRIOR	\$400.00	\$350.00	\$300.00	\$350.00	\$400.00	\$300.00	\$400.00	\$350.00	\$450.00	\$350.00	\$450.00	\$350.00	\$4,450.00
	SALES GOAL	\$500.00	\$400.00	\$500.00	\$400.00	\$500.00	\$400.00	\$500.00	\$400.00	\$500.00	\$400.00	\$500.00	\$400.00	\$5,400.00
	% OF CHANGE	25%	14%	67%	14%	25%	33%	25%	14%	11%	14%	11%	14%	21%
	YEAR PRIOR	\$400.00	\$350.00	\$300.00	\$350.00	\$400.00	\$300.00	\$400.00	\$350.00	\$450.00	\$350.00	\$450.00	\$350.00	\$4,450.00
ITEM 3	SALES GOAL	\$500.00	\$400.00	\$500.00	\$400.00	\$500.00	\$400.00	\$500.00	\$400.00	\$500.00	\$400.00	\$500.00	\$400.00	\$5,400.00
	% OF CHANGE	25%	14%	67%	14%	25%	33%	25%	14%	11%	14%	11%	14%	21%
	YEAR PRIOR	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ITEM 4	SALES GOAL	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	% OF CHANGE	#DIV/0!												
	YEAR PRIOR	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ITEM 5	SALES GOAL	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	% OF CHANGE	#DIV/0!												
ITEM 6	YEAR PRIOR	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	SALES GOAL	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	% OF CHANGE	#DIV/0!												
	YEAR PRIOR	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ITEM 7	SALES GOAL	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	% OF CHANGE	#DIV/0!												
14 T T T T T T T T T T T T T T T T T T T	YEAR PRIOR	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ITEM 8	SALES GOAL	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	% OF CHANGE	#DIV/0!												
ITEM 9	YEAR PRIOR	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	SALES GOAL	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	% OF CHANGE	#DIV/0!												
ITEM 10	YEAR PRIOR	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	SALES GOAL	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	% OF CHANGE	#DIV/0!												
							MONTHLY							
	YEAR PRIOR TOTAL	\$1,200.00	\$1,050.00	\$900.00	\$1,050.00	\$1,200.00	\$900.00	\$1,200.00	\$1,050.00	\$1,350.00	\$1,050.00	\$1,350.00	\$1,050.00	\$13,350.00
	SALES GOAL TOTAL	\$1,500.00	\$1,200.00	\$1,500.00	\$1,200.00	\$1,500.00	\$1,200.00	\$1,500.00	\$1,200.00	\$1,500.00	\$1,200.00	\$1,500.00	\$1,200.00	\$16,200.00
	% OF CHANGE TOTAL	25%	14%	67%	14%	25%	33%	25%	14%	11%	14%	11%	14%	21%





Return Reasons

47%

32%

10%

8%

3%

Item Does Not Fit

Defective Item

Damaged Item

Wrong Item Delivered

Late Delivery

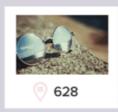
#### Sales & Order Dashboard

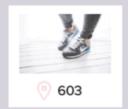


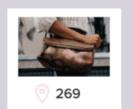


#### Topseller By Orders

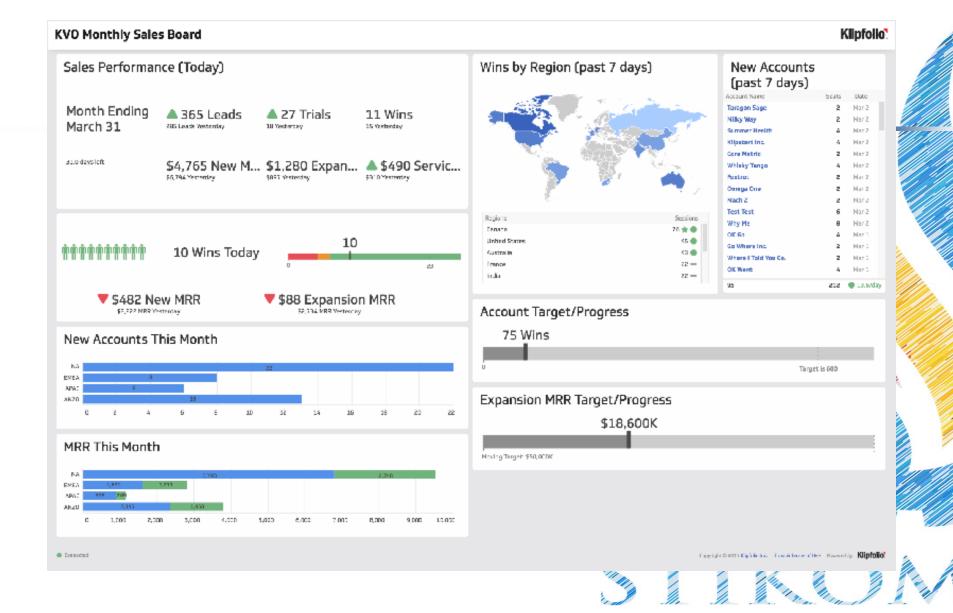












#### UGLY, BAD, AND WRONG FIGURES

#### Ugly

A figure that has aesthetic problems but otherwise is clear and informative

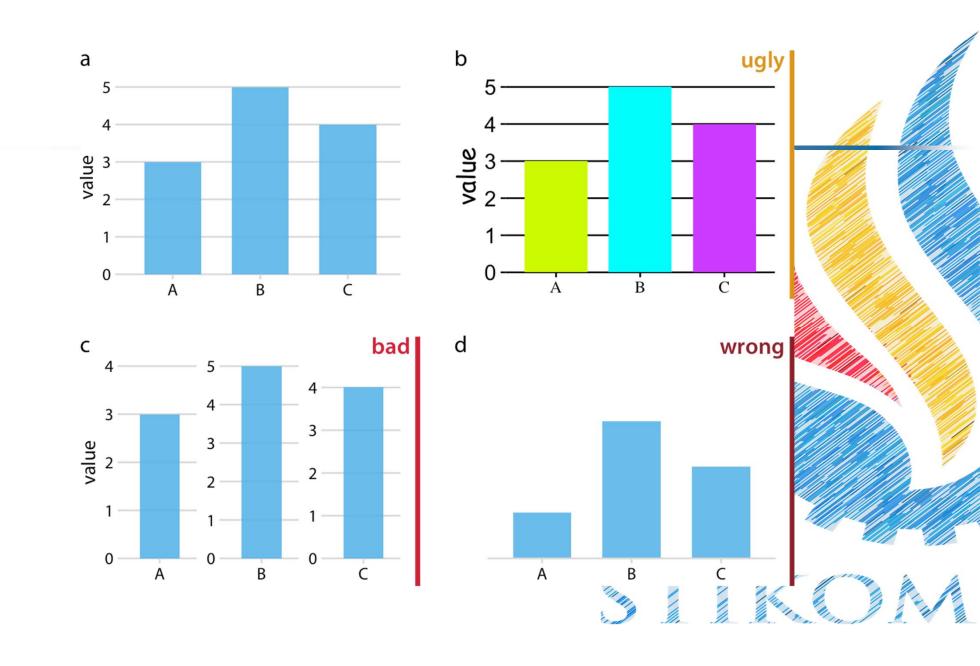
#### Bad

A figure that has problems related to perception; it may be unclear, confusing, overly complicated, or deceiving

#### Wrong

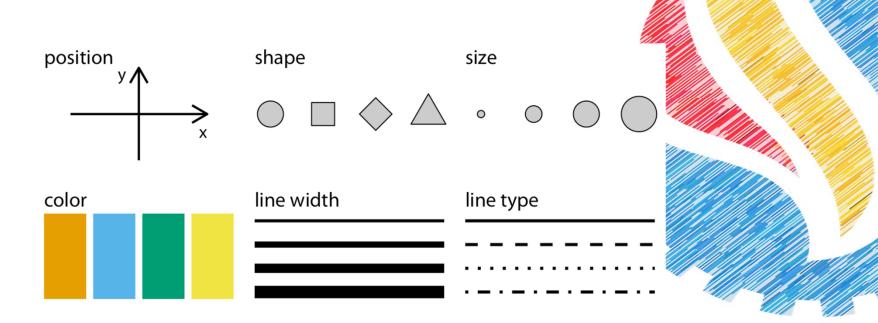
A figure that has problems related to mathematics; it is objectively incorrect





#### AESTHETICS AND TYPES OF DATA

Shapes



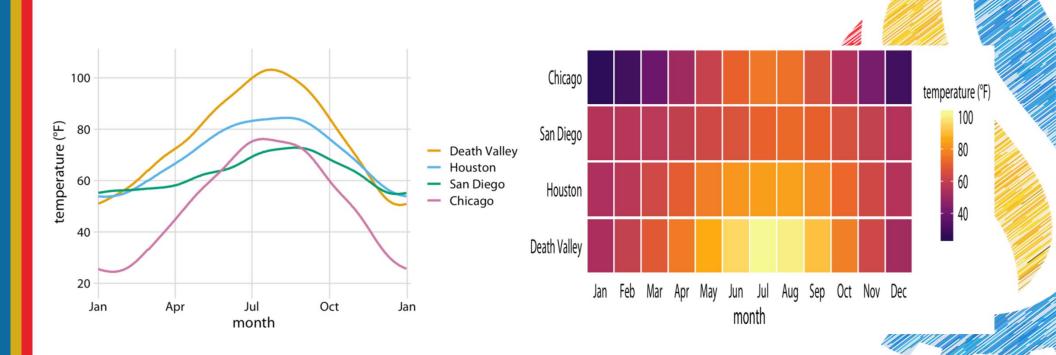


Type of variable	Examples	Appropriate scale	Description
Quantitative/ numerical continuous	1.3, 5.7, 83, 1.5 × 10 <sup>-2</sup>	Continuous	Arbitrary numerical values. These can be integers, rational numbers, or real numbers.
Quantitative/ numerical discrete	1, 2, 3, 4	Discrete	Numbers in discrete units. These are most commonly but not necessarily integers. For example, the numbers 0.5, 1.0, 1.5 could also be treated as discrete if intermediate values cannot exist in the given dataset.
Qualitative/ categorical unordered	dog, cat, fish	Discrete	Categories without order. These are discrete and unique categories that have no inherent order. These variables are also called <i>factors</i> .
Qualitative/ categorical ordered	good, fair, poor	Discrete	Categories with order. These are discrete and unique categories with an order. For example, "fair" always lies between "good" and "poor." These variables are also called ordered factors.
Date or time	Jan. 5 2018, 8:03am	Continuous or discrete	Specific days and/or times. Also generic dates, such as July 4 or Dec. 25 (without year).
Text	The quick brown fox jumps over the lazy dog.	None, or discrete	Free-form text. Can be treated as categorical if needed.

## SAMPLE DATA

Month	Day	Location	Station ID	Temperature (°F)
Jan	1	Chicago	USW00014819	25.6
Jan	1	San Diego	USW00093107	55.2
Jan	1	Houston	USW00012918	53.9
Jan	1	Death Valley	USC00042319	51.0
Jan	2	Chicago	USW00014819	25.5
Jan	2	San Diego	USW00093107	55.3
Jan	2	Houston	USW00012918	53.8
Jan	2	Death Valley	USC00042319	51.2





OTHER EXAMPLES



#### TUGAS – 1

Cari 5 Tools Data Visualization jelaskan fungsi dan keunggulan tools tersebut tulis dalam Minimal 1 halaman maksimal 2 Halaman kertas Double polio

