
ITEP203
Quantitative
Method
including
Modeling and
Simulation
csv
BUSINESS ANALYTICS
tableau
Working with Data
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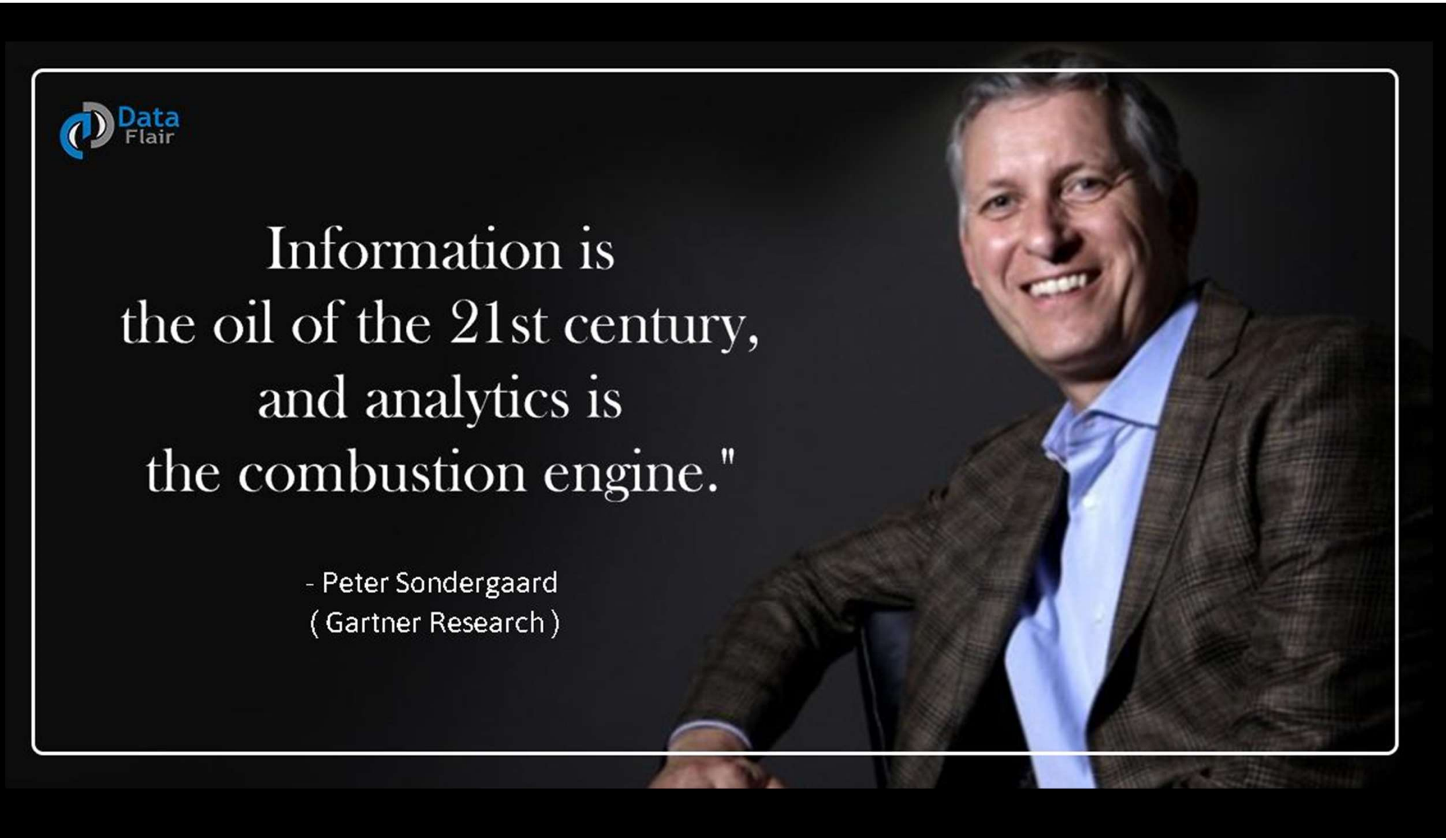
01. Introduction

Glimpse Into Data Use Cases

- In order for you to see how data is being used across many industries, you will hear from three individuals from greatly differing industries.
- Once you hear from Mitch, Emily, and Phil you will be ready to take on your first project. Following each story, there is a short activity. These activities **do not** need to be submitted as a part of the project, but are a part of introducing you to the tools you will be learning about throughout this program!


Data Flair
Information is
the oil of the 21st century,
and analytics is
the combustion engine."
- Peter Sondergaard
(Gartner Research)

01. Introduction

Similar to the examples, your first project will include data from three entirely different use cases. There are **three goals for this first project**:

1. Begin building your data intuition by looking at data dashboards and drawing insights for yourself.

2. Understand how the Business Analysis works. The project review system is one of the **absolute** best aspects of being a BA student, and it is the key to becoming a Data Analyst. You must pass all the projects!

3. Glimpse into your future. By the end of this course, you will not only be able to draw conclusions from these dashboards, but you will be able to build dashboards for yourself just like the ones you see here in the first project!

- The aim of this whole project is mostly to show you the data analyst process.

02. Interview 1: Sparta Science

03. Sports Data in Excel

NFL Team Projected Rankings

- The following is a header of NFL team rankings according to Team Rankings (https://www.teamrankings.com/ncf/stats/) shown in a spreadsheet application. Spreadsheets will be a part of your first major project. For now, see if you can understand the basics of the data being stored here.
- Again, there is nothing to turn in from this part of the project, but shows one application of spreadsheets.
- Spreadsheets are used to **store**, **analyze**, and **present** data for a number of industries. An example of what data stored in a spreadsheet might look like is shown below.

Rank	Rating	Team	Proj W	Proj L	Playoffs	Win SB
1	8.9	New England (0-0)	12	4	92.40%	23.00%
2	5.6	Pittsburgh (0-0)	10.3	5.7	70.90%	9.50%
3	5	Seattle (0-0)	10.4	5.6	73.10%	9.40%
4	4.5	Green Bay (0-0)	9.8	6.2	64.50%	7.80%
5	2.9	Dallas (0-0)	9.1	6.9	52.80%	4.70%
6	2.7	Kansas City (0-0)	8.9	7.1	49.50%	3.80%
7	2.4	Oakland (0-0)	8.8	7.2	46.70%	3.40%
8	2.2	Atlanta (0-0)	8.9	7.1	49.30%	3.80%
9	1.6	Arizona (0-0)	9.1	6.9	51.90%	3.40%
10	1.4	Cincinnati (0-0)	8.7	7.3	43.50%	2.60%
11	1.3	Denver (0-0)	8.5	7.5	40.40%	2.30%
12	1.3	Minnesota (0-0)	8.7	7.3	44.60%	2.90%
13	1.2	Carolina (0-0)	8.8	7.2	47.00%	3.00%
14	1.2	NY Giants (0-0)	8.4	7.6	42.60%	2.80%
15	1.1	Baltimore (0-0)	8.6	7.4	42.90%	2.40%
16	0.9	Tennessee (0-0)	8.6	7.4	48.40%	2.60%
17	0.5	Houston (0-0)	8.2	7.8	38.70%	1.90%
18	-0.1	Tampa Bay (0-0)	7.9	8.1	31.80%	1.60%
19	-0.1	Philadelphia (0-0)	7.9	8.1	32.60%	1.60%
20	-0.6	Detroit (0-0)	7.5	8.5	28.50%	1.40%
21	-1.4	New Orleans (0-0)	7.6	8.4	28.40%	1.10%

03. Sports Data in Excel

Quiz Question:

1.Next to each **Team** you can see the team record. Who has the best record?

a. Arizona
b. Minnesota
c. Carolina
d. Detroit
e. None of the Above

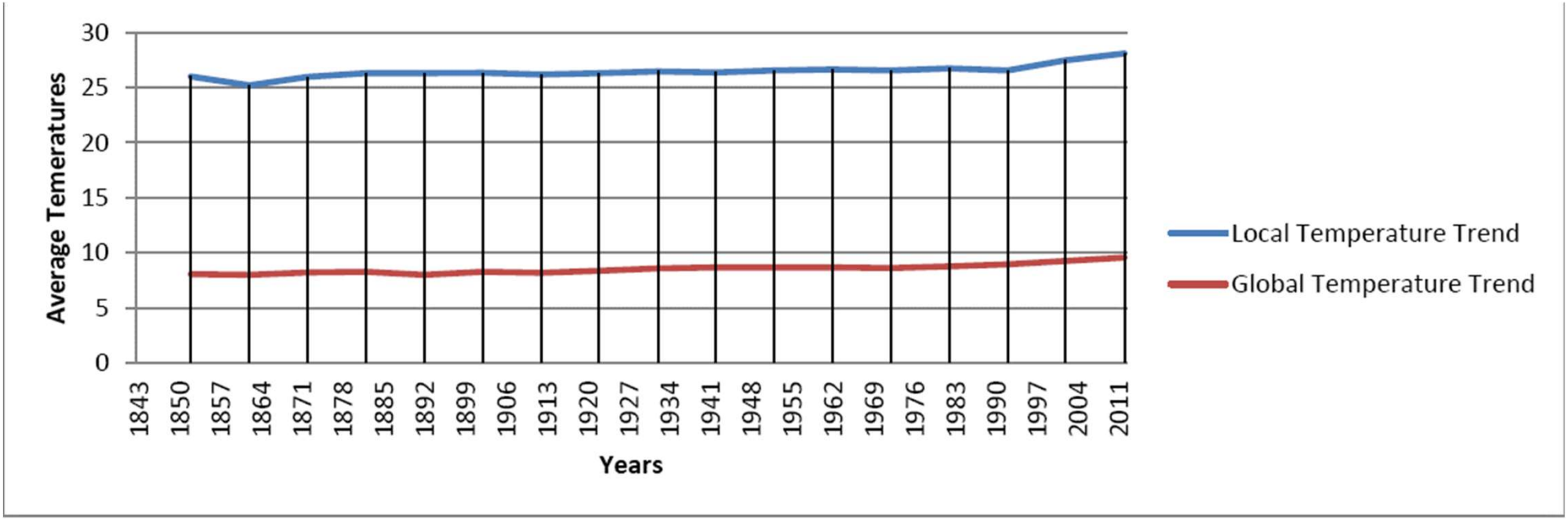
2. Match each team beside the appropriate data describing the team.

ANSWER CHOICES: **A. Projected 12 Wins, B. Playoff Win % of 49.5%, C. Rank of 13, D. 0-0 Record**

1. Kansas City
2. None of Them
3. Cincinnati
4. Carolina
5. All of them
6. New England

04. Interview 2: Farmer Mitch

05. Weather Data in SQL



OBSERVATION

Abu Dhabi city is hotter on the average then the global average .
The changes in Abu Dhabi city temperatures is very small over time like the changes in the global average.
The world from the line chart is getting hotter over time.
the trend in the global and local was consistent over the last hundred years.
The heat over time will increase, it will effect the earth in a bad way.
The type of correlation coefficient is Positive Correlation.

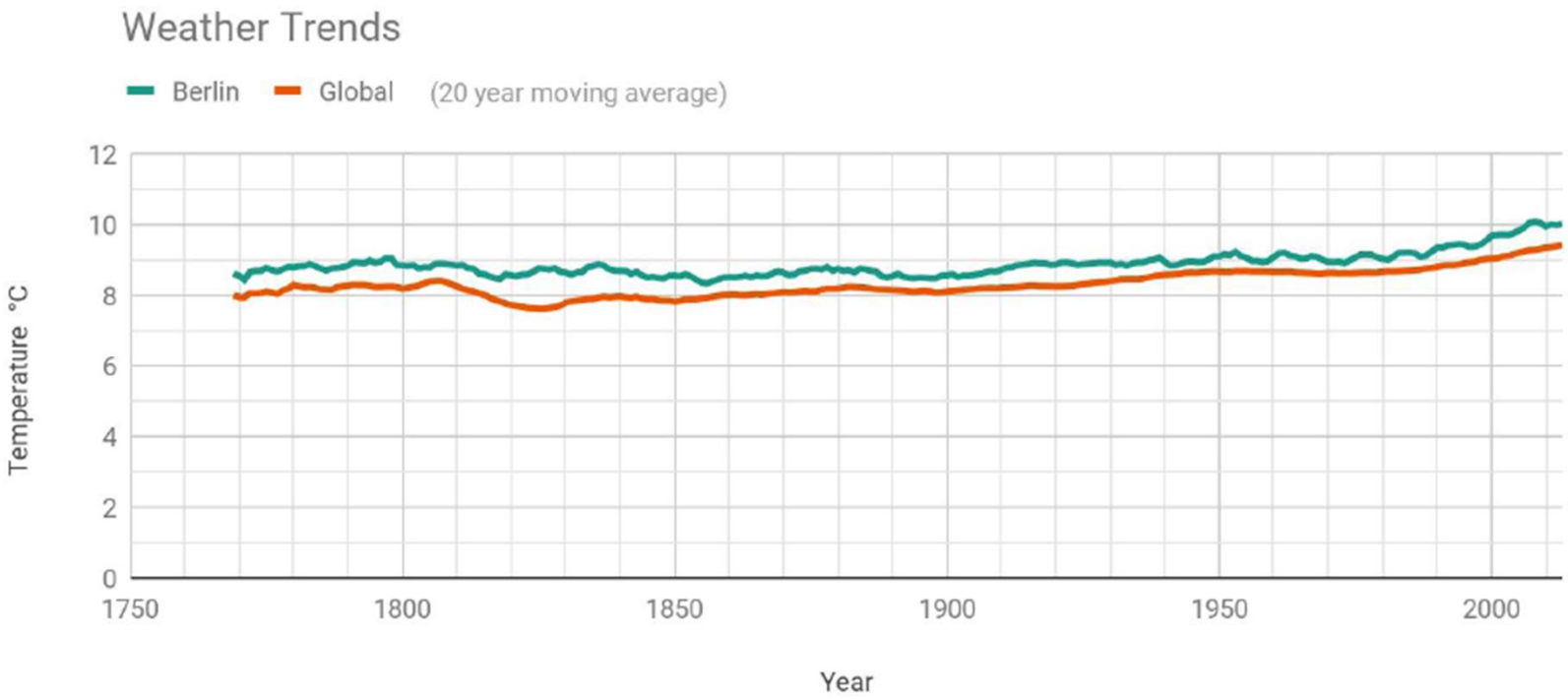
05. Weather Data in SQL

Observations

● The upward going trend in both areas indicates that the temperature is increasing globally.

● Berlin seems to be slightly warmer than the global average, the difference being less than 1 degree.

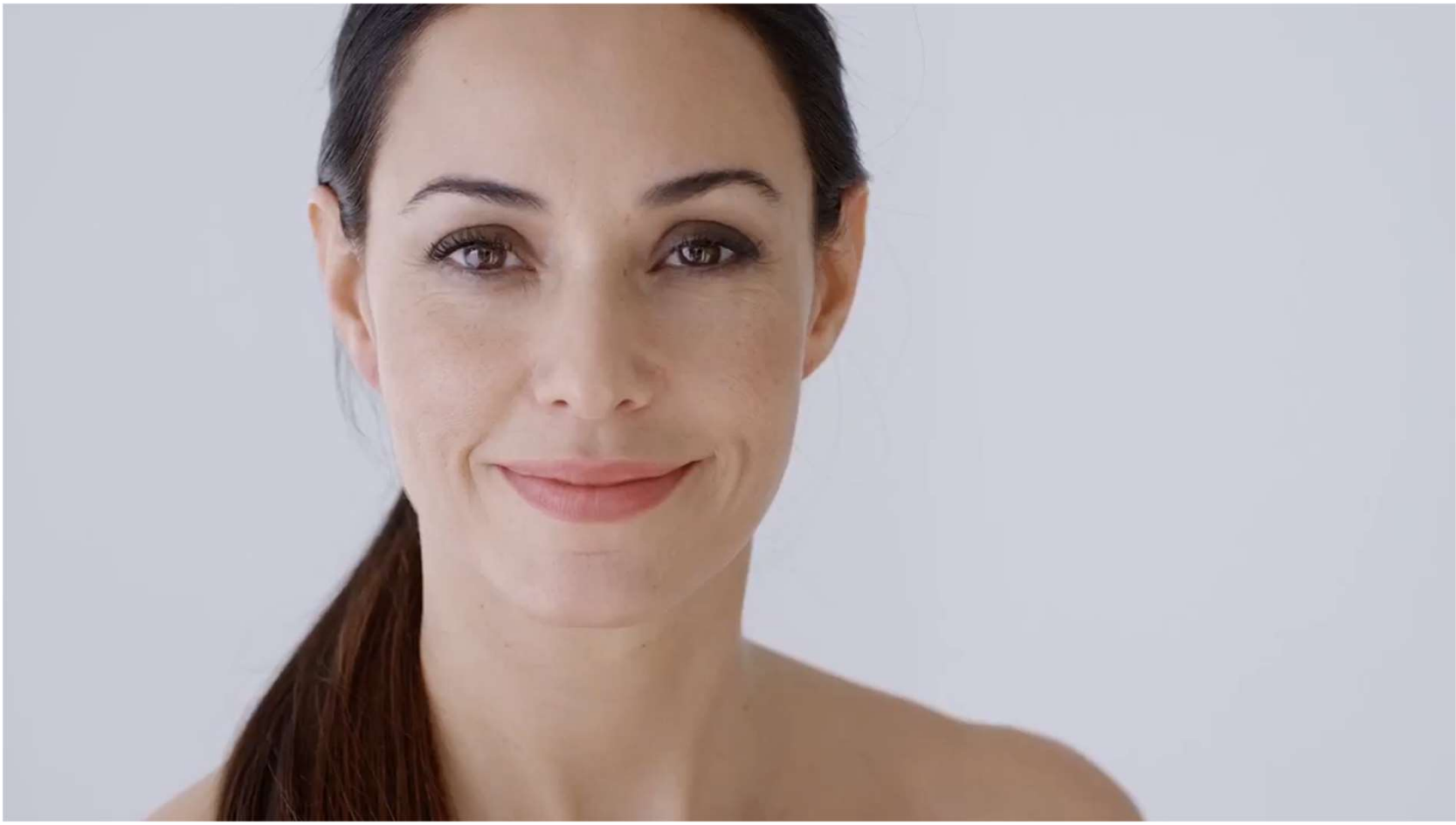
● Although a similar general trend can be seen in both cases, Berlin's moving average shows more fluctuations in temperature.



● A decrease in temperature can be observed in the early 1800s, more significant globally than in Berlin, the average global temperature dropping under 8 degrees for several years in a row before starting to increase again at the end of the 1820s.

● The average temperature seems to be increasing at a higher rate in the most recent years, since the 1980s at least, yearly averages of over 10 degrees

06. Interview 3: Uncommon Bold



07. Project Introduction

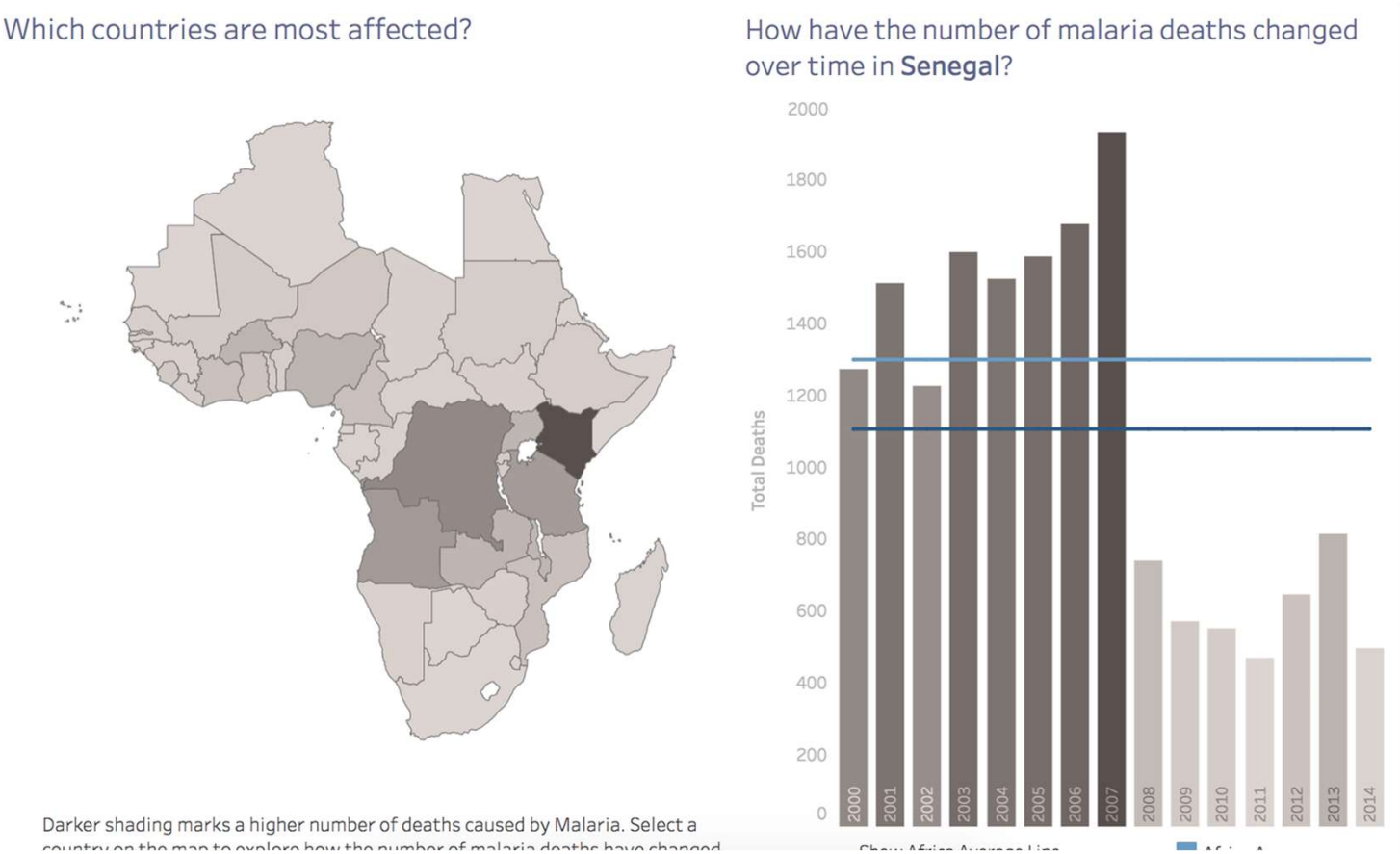
Project description

- A large part of working with data is being able to interpret data visualizations and explain your insights to others. To give you some practice with this, we've selected a few Tableau dashboards for you to explore. The links are below, under "Choose from these Dashboards." Choose one of these dashboards, whichever one interests you the most, and find **three insights** in the visualizations. For each insight, **provide a static image** that shares what you found. Write a short report explaining each observation and how you found the information to reach your conclusion from the dashboard. Altogether (including images), your report should be 1-2 pages.

08. Project Overview

Example:

“Deaths per year due to malaria in Senegal have been halved since 2007. From that dashboard, I clicked on Senegal on the map, this showed deaths due to malaria for each year from 2000 to 2014. Before 2007, there were about 1400-1500 deaths per year. After 2007, starting in 2008, deaths were reduced to about 600-700 per year.”



08. Project Overview

Note:

Submit this report as a PDF. All the images and your summary should be in **one** PDF with each summary following the image of the insight.

Choose from these dashboards

Madrid in Detail
https://public.tableau.com/en-us/gallery/madrid-details?gallery=featured

Malaria in Africa
https://public.tableau.com/en-us/gallery/malaria-africa?gallery=featured

LinkedIn Top Skills https://public.tableau.com/profile/matt.chambers#!/vizhome/LinkedInTopSkills2016-MakeoverMonday/LinkedInTopSkills2016-MakeoverMonday

Interpret a Data Visualization

Completeness

Criteria	Meet Specification
Required number of insights	Three insights are reported.
Insight explanations	Each insight has an explanation describing how the insight was reached from the data. For each insight, provide a screenshot that shows what you found in the dashboard.

Correctness

Criteria	Meet Specification
Correct conclusions	Student's conclusions are correct based on the data.
Correct usage	The dashboard was used appropriately to find the information.

References

Business Analytics:
https://www.udacity.com/course/business-analytics-nanodegree--nd098

https://spartascience.com/

https://public.tableau.com/en-us/gallery/madrid-details?gallery=featured

https://public.tableau.com/en-us/gallery/malaria-africa?gallery=featured

https://public.tableau.com/profile/matt.chambers#!/vizhome/LinkedInTopSkills2016-MakeoverMonday/LinkedInTopSkills2016-MakeoverMonday

Th@nk You!!!

Any Questions???