

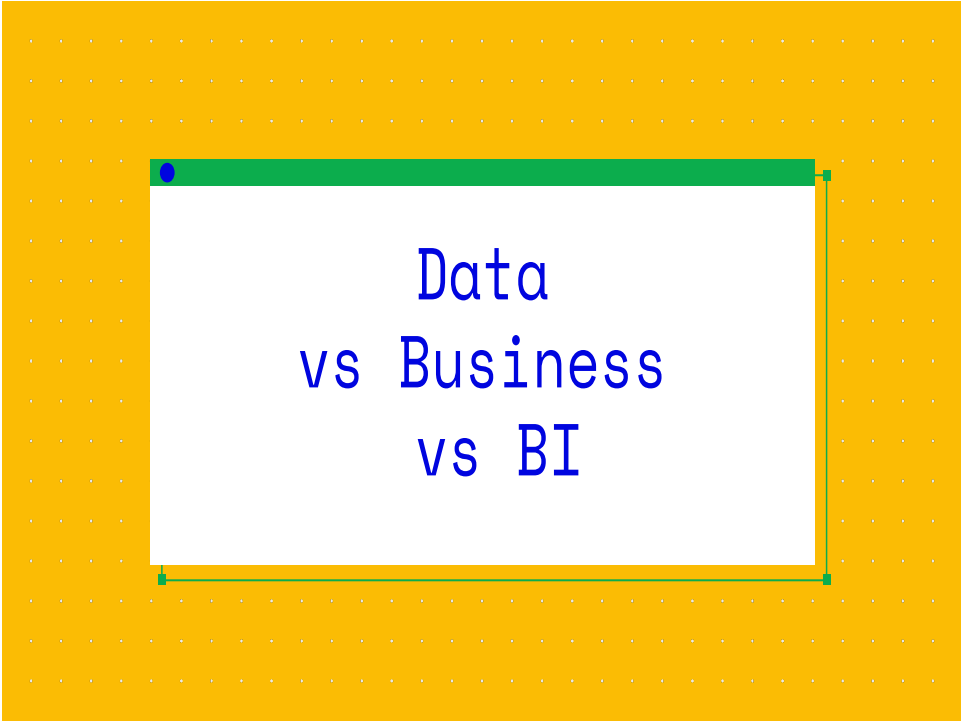


Data Visualization

Agenda:

1. Analysts Jobs (Data vs Business vs BI)
2. Why build visuals and stream?
3. Coursera Courses
4. Questions

Here is a quick overview of what we'll cover today.



Data
vs Business
vs BI

Business Case Studies

- are real-world experiences of how business people and companies succeed or fail
- examine events that have already happened
- We do not need a dataset to learn from **business cases**
- We could learn from them and attempt to prevent making a similar mistake in future



Business Case Studies: Example

Ryanair: cost-friendly budget airline that sells tickets so cheap

- travel to less busy airports
 - far from the city center
 - outside business hours
- charges for almost every small addition
- tries to keep planes for small times on airfields to save on rent
- operates only one type of aircraft to speed out ground crew processes

Business

Business Case
Studies

Qualitative
Analytics

Preliminary
Data Report

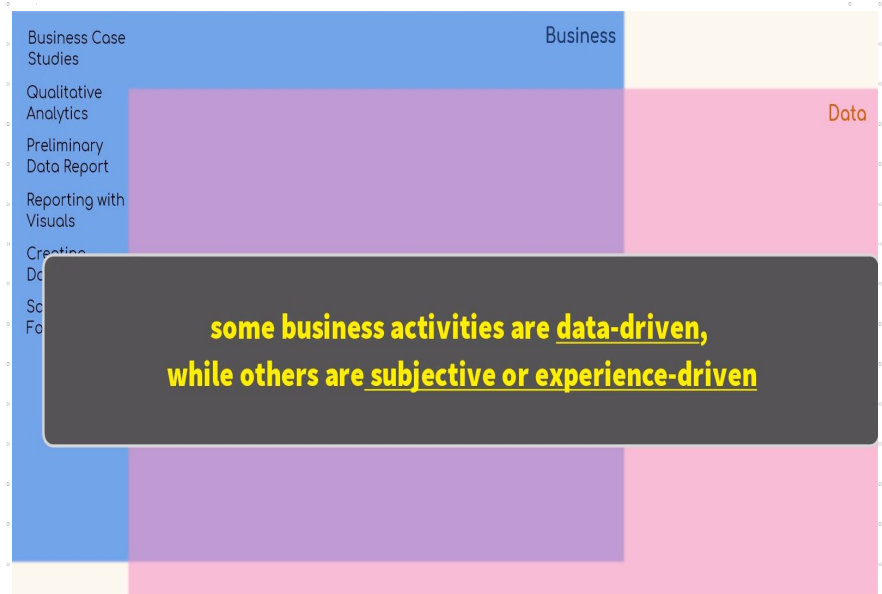
Reporting with
Visuals

Creating
Dashboards

Sales
Forecasting

Business

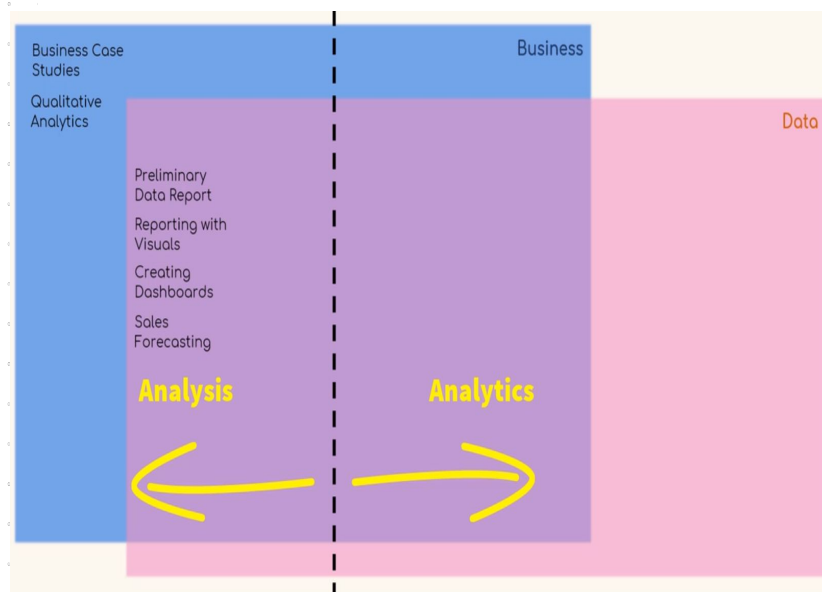
Data?



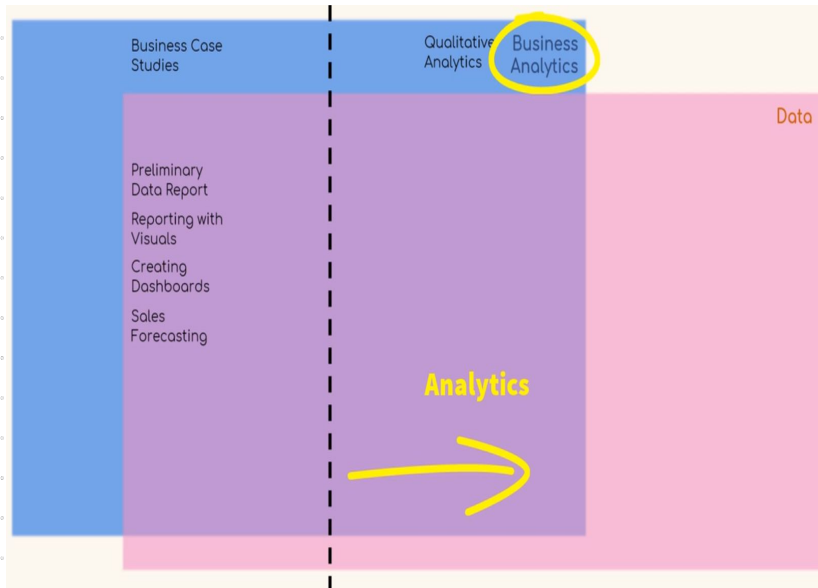
Data



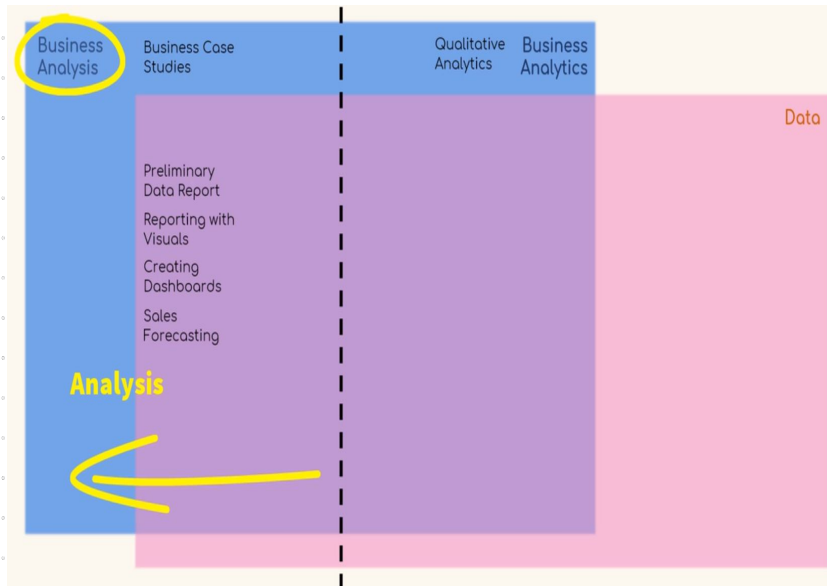
Past vs Future?



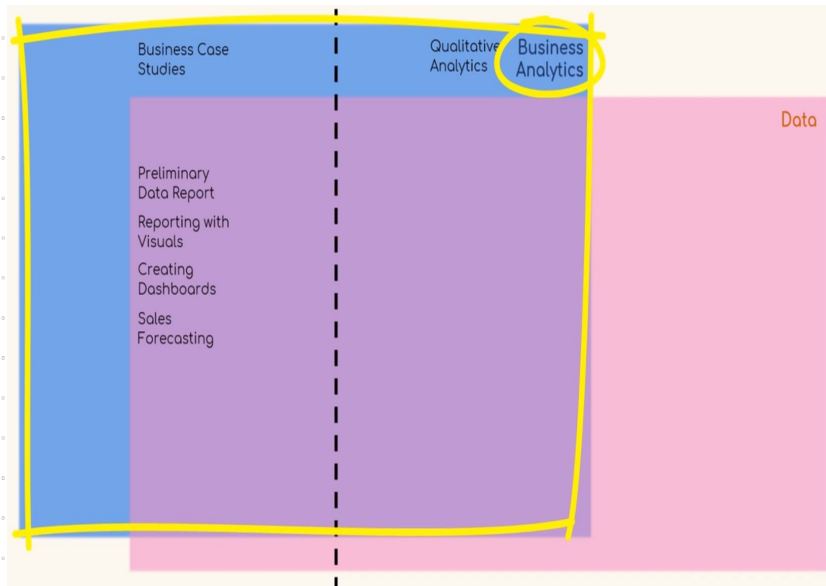
Business Analytics



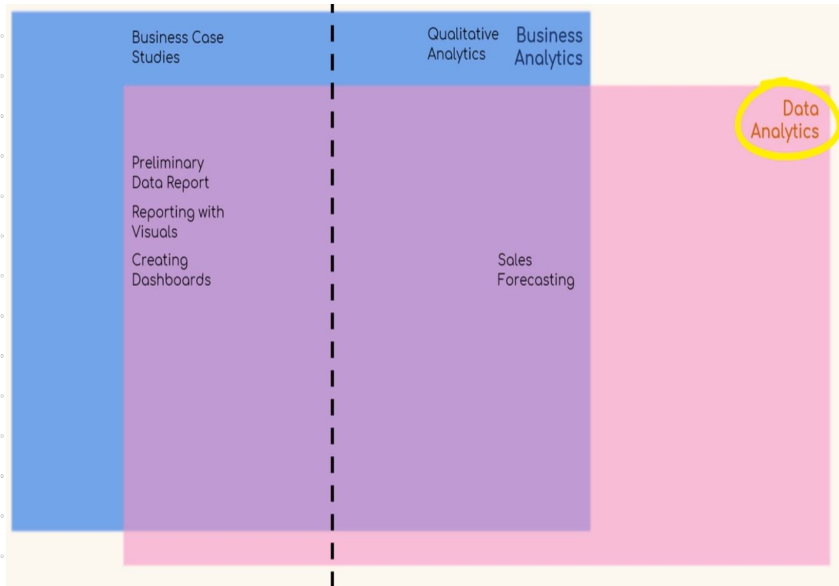
Business Analysis



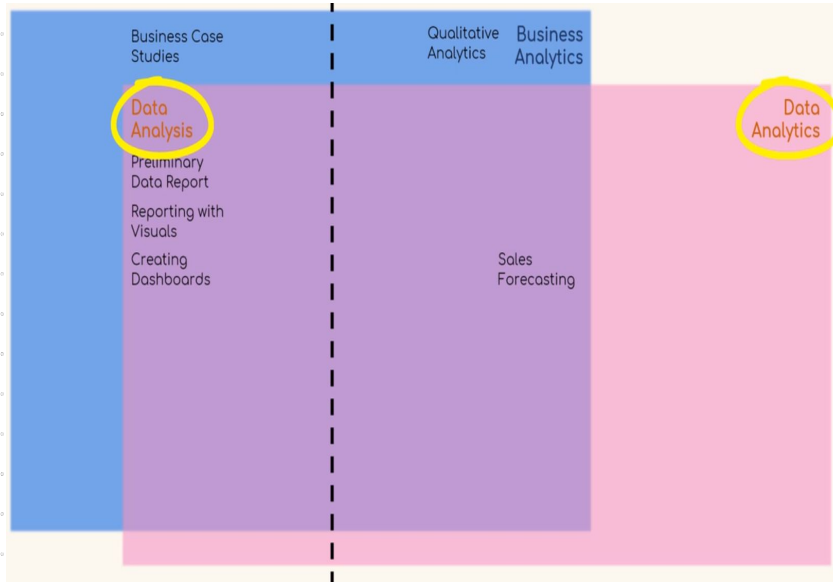
Business Analytics += Business Analysis



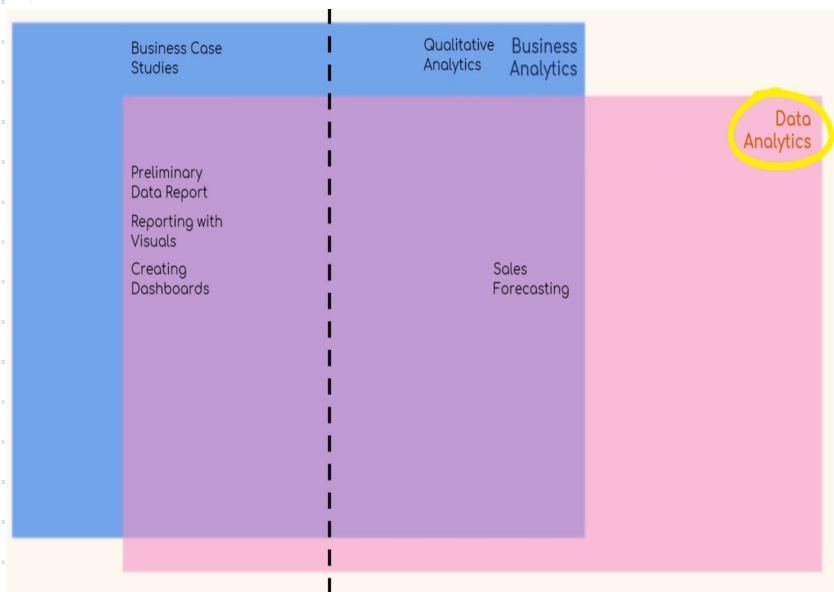
Data Analytics



Data Analysis



Data Analytics += Data Analysis



Analytics has become a term comprising both:

Analytics += Analysis

- Analytics has become a term comprising both:
 - Analysis
 - Analytics
- which is something confusing in practice

Data Analysts vs Business Analysts vs BI Analysts

Data Analyst common tasks:

- Working with stakeholders to define a problem or business need
- Cleaning and preparing data for analysis
- Analyzing data for patterns and trends
- **Visualizing data** to make it easier to understand
- Presenting data in such a way that it tells a compelling story

<https://www.coursera.org/articles/data-analyst-vs-business-analyst>

<https://www.coursera.org/articles/business-intelligence-analysts-what-they-are-and-how-to-become-one>

Data Analysts vs Business Analysts vs BI Analysts

Business Analyst common tasks:

- Evaluating a company's current functions and IT structures
- Reviewing processes to identify areas for improvement
- Interviewing team members to identify areas for improvement
- Presenting recommendations/findings to management and other key stakeholders
- **Creating visuals** and financial models to support business decisions

<https://www.coursera.org/articles/data-analyst-vs-business-analyst>

<https://www.coursera.org/articles/business-intelligence-analysts-what-they-are-and-how-to-become-one>

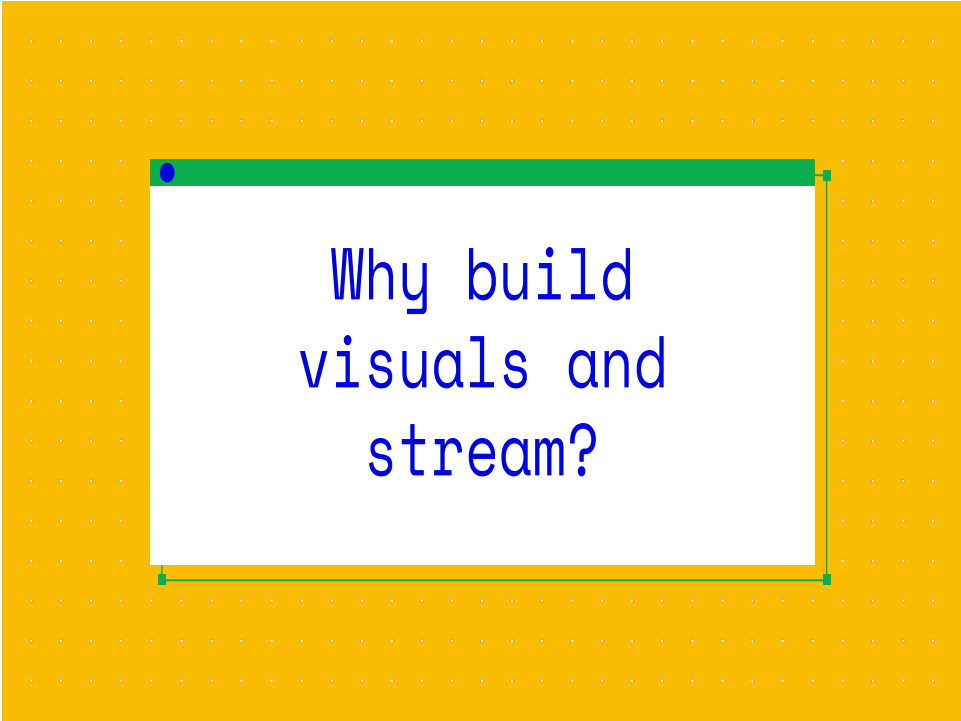
Data Analysts vs Business Analysts vs BI Analysts

BI Analyst:

- Somewhat of a hybrid between **Business Analyst** and **Data Analysts**
- They use analysis, modeling, and **visualization** of:
 1. industry trends
 2. competitive landscape
- to help businesses cut losses and increase profits

<https://www.coursera.org/articles/data-analyst-vs-business-analyst>

<https://www.coursera.org/articles/business-intelligence-analysts-what-they-are-and-how-to-become-one>



Why build
visuals and
stream?

Why build visuals?

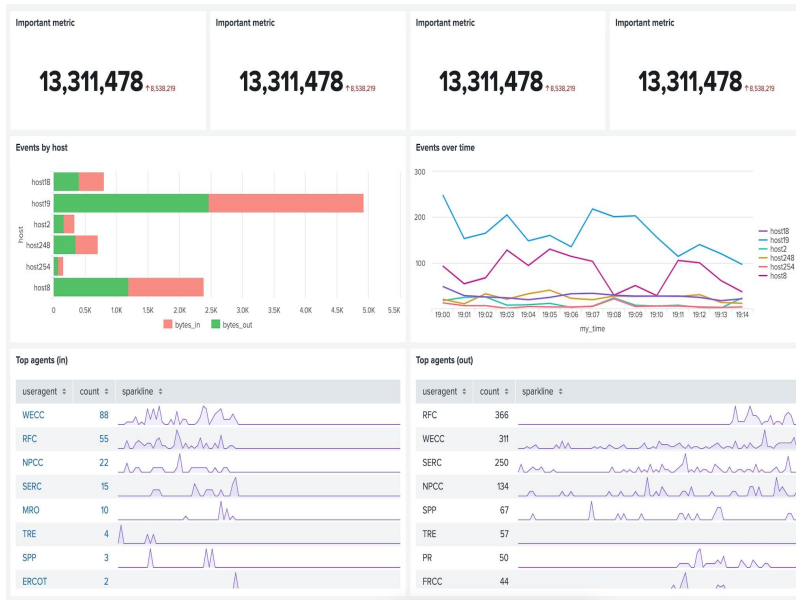
- A picture is worth a thousand words
- For Exploratory Data Analysis (EDA)
- Communicate data clearly
- Support recommendations to different stakeholders
- Share unbiased representation of data
 - Do all who build visuals create an unbiased representation of data?

•

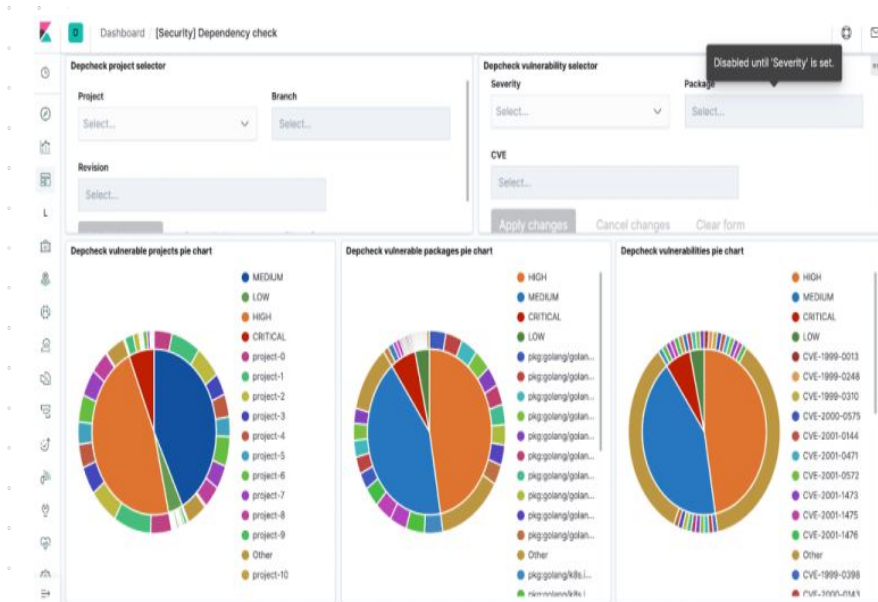
Why do we stream data?

- Get real-time info in a dashboard or another means
- Make decisions in real-time
- If data comes in late, it's no longer valuable
 - especially during an emergency
- **Example** in cybersecurity: New York City Cyber Command
 - 5 or 6 TB on weekdays & 2 or 3 TB on weekends
 - **Security Analysts** can access the data in several ways:
 - run queries in the data warehouse
 - use other tools that will provide **visualizations** of the data
 - Check for example: **Splunk Certified Cybersecurity Defense Analyst**
- https://www.splunk.com/en_us/training/certification-track/splunk-certified-cybersecurity-defense-analyst.html

Cybersecurity Dashboard Example 1: Splunk



Cybersecurity Dashboard Example 2: ELK



The **ELK** stack is an acronym for **Elasticsearch**, **Logstash**, and **Kibana**.

1. Elasticsearch: The Search and Analytics Engine

- Elasticsearch is a highly scalable, open-source search and analytics engine.
- It's the core of the stack, and its job is to store and index all of data.

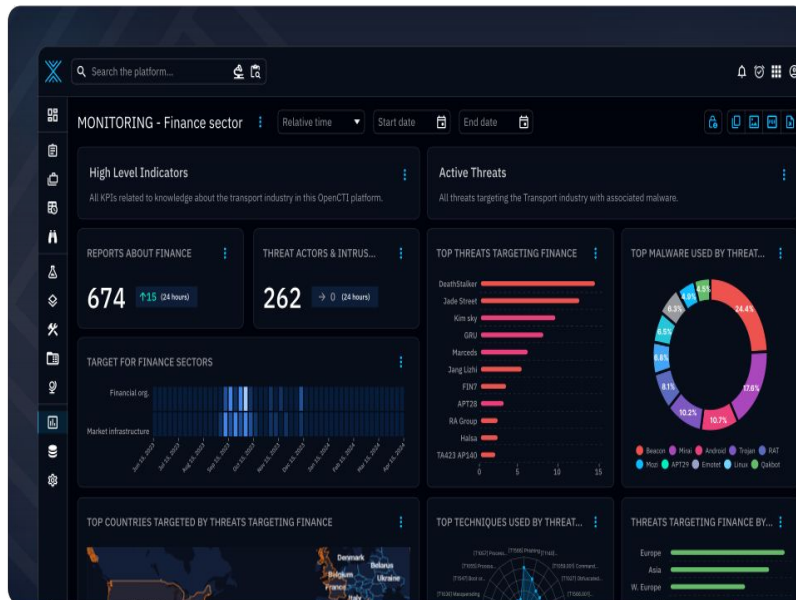
2. Logstash: The Data Processing Pipeline

- Logstash is an open-source data collection pipeline that has three main stages: input, filters, and output.
- Logstash ingests data from various sources and transforms it into a structured format that Elasticsearch can understand.

3. Kibana: The Visualization Layer

- Kibana is the visualization tool for the data in Elasticsearch.
- It allows to create **interactive dashboards**, charts, and graphs to explore, analyze, and visualize security data.

Cybersecurity Dashboard Example 3: OpenCTI



Open Cyber Threat Intelligence (OpenCTI)

It refers to an open-source platform designed for managing, organizing, and visualizing information about cyber threats.



Average Salaries

Data Analyst Average Salaries: Egypt 26/09/23

Experience

All years of Experience



Industry

All industries



EGP 27,000 /mo



Very High Confidence

Total Pay

EGP 9,000 /mo

Base Pay

EGP 27,000 /mo



EGP 16K - EGP 45K

EGP 18,000 /mo

Additional Pay



EGP 7K

EGP 124K



Most Likely Range



Possible Range

According to <https://www.glassdoor.com>

Data Scientist Average Salaries: Egypt 24/09/2023

Experience

All years of Experience



Industry

All industries



EGP 35,010 / mo

 Very High Confidence

Total Pay

EGP 12,000 / mo

Base Pay

EGP 35,010 / mo



EGP 18K

EGP 63K

EGP 23,010 / mo

Additional Pay

EGP 12K

EGP 95K

 Most Likely Range  Possible Range

According to <https://www.glassdoor.com>

Some Jobs for Data Analysts in Egypt: 19/10/2024


Popular companies for a Data Analyst in Cairo, Egypt

Q Search by employer

City or Metro Area

767 results

Popular




3.8

EGP 11K - EGP 25K/mo Total Pay

EGP 15K Median

Data Analyst

3K open jobs




3.5

EGP 15K - EGP 34K/mo Total Pay

EGP 20K Median

Data Analyst

Create job alert




3.7

EGP 11K - EGP 30K/mo Total Pay

EGP 18K Median

Data Analyst

2 open jobs




3.5

EGP 12K - EGP 33K/mo Total Pay

EGP 16K Median

Data Analyst

Create job alert




3.6

EGP 8K - EGP 10K/mo Total Pay

EGP 9K Median

Data Analyst

8 open jobs




3.5

EGP 11K - EGP 12K/mo Total Pay

EGP 11K Median

Data Analyst

Create job alert




3.5

EGP 15K - EGP 15K/mo Total Pay

EGP 15K Median

Data Analyst

Create job alert




3.3

EGP 10K - EGP 10K/mo Total Pay

EGP 10K Median

Data Analyst

Create job alert



3.8

EGP 8K - EGP 10K/mo Total Pay

EGP 9K Median

Data Analyst

Create job alert

Data Scientist Hiring: Egypt 23/09/2025

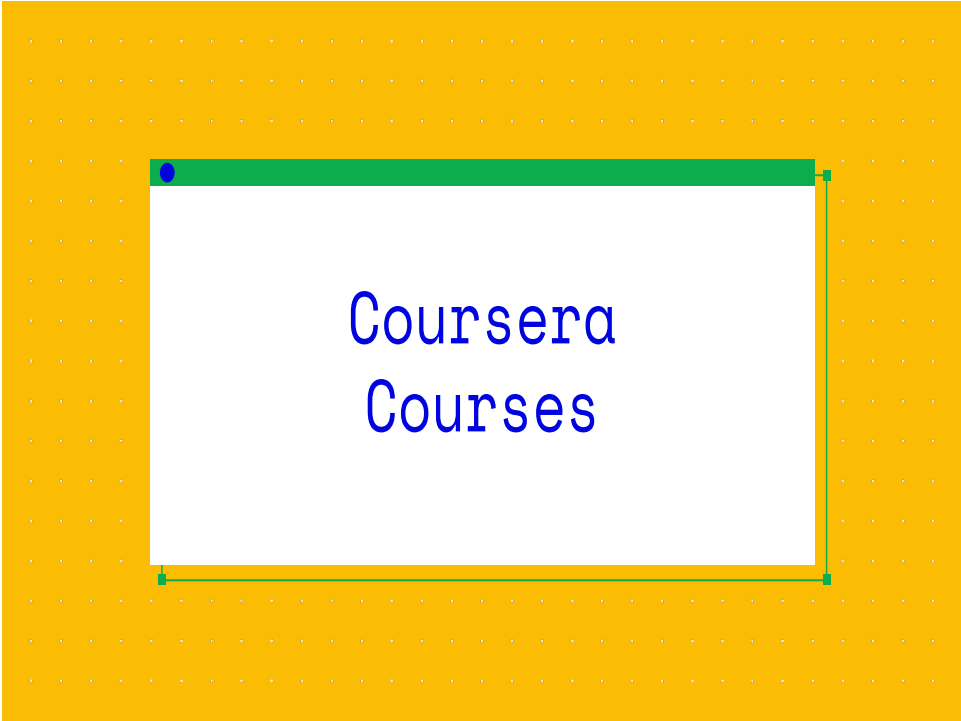
مطلوب Data Scientist براتب 80 ألف

We're Hiring an Data Scientist
Compensation: Salary up to 80,000 EGP
Experience: (3-4 Years)

Strong knowledge of Python/R, SQL, and data visualization tools
Experience with machine learning frameworks (e.g., scikit-learn, TensorFlow)
Proven ability to work with large datasets and build predictive models
Excellent problem-solving and communication skills

:Nice to Have
Experience in a product or tech-driven environment
Knowledge of cloud platforms (AWS, GCP, or Azure)

to discuss all details send your updated CV via



Coursera Courses

Coursera Course Link 1: Python for Data Science


<https://www.coursera.org/learn/python-for-applied-data-science-ai?specialization=ibm-data-science>

Coursera Course Link 2: Data Analysis w/ Python

<https://www.coursera.org/learn/data-analysis-with-python?specialization=ibm-data-science>

Enroll in Coursera Courses - 1


← → coursera.org/learn/data-analysis-with-python?specialization=ibm-data-science


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[Browse](#) > [Data Science](#) > [Data Analysis](#)

Data Analysis with Python

★★★★★ 4.7 16,233 ratings | 🍌 93%

 Joseph Santarcangelo

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Starts Feb 16

Try for Free: Enroll to start your 7-day full access free trial
Financial aid available

301,511 already enrolled

Enroll in Coursera Courses - 2


[coursera.org](#)/learn/data-analysis-with-python?specialization=ibm-data-science

coursera

Browse > Data Science > Data Analysis

Data Analysis with Python

★★★★★ 4.7 16,233 ratings | 👍 93%

 Joseph Santarcangelo

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Financial aid available

301,511 already enrolled

About Instructors Syllabus Reviews Enrollment

About this Course

738,343 recent views

Step 1 of 2

Choose a program

You're enrolling in **Data Analysis with Python**, which is available as part of multiple learning programs. These programs are designed to help you become job ready or master a skill. Select the program that is right for you from the list below.

Learning program

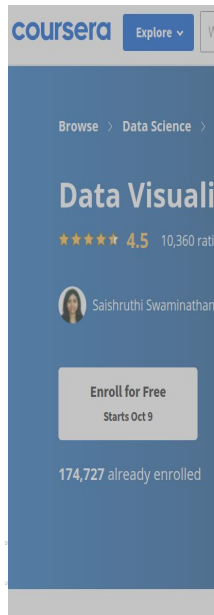
IBM Data Science Professional Certificate ▾

There are 10 courses in this program

- Course 1: What Is Data Science?
- Course 2: Tools for Data Science
- Course 3: Data Science Methodology
- Course 4: Python for Data Science, AI & Development
- Course 5: Python Project for Data Science
- Course 6: Databases and SQL for Data Science with Python
- **Course 7: Data Analysis with Python**
- Course 8: Data Visualization with Python
- Course 9: Machine Learning with Python
- Course 10: Applied Data Science Capstone

Next

Enroll in Coursera Courses - 3



The screenshot shows the Coursera interface for the course 'Data Visualization with Python'. At the top, there's a 'coursera' logo and an 'Explore' dropdown menu. Below this, a breadcrumb trail reads 'Browse > Data Science >'. The course title 'Data Visuali' is prominently displayed, followed by a 4.5-star rating and '10,360 ratings'. The instructor's name, 'Saishruthi Swaminathan', is shown with a profile picture. A grey button labeled 'Enroll for Free' indicates the course 'Starts Oct 9'. At the bottom, it states '174,727 already enrolled'.

Step 2 of 2

7-day Free Trial

Data Visualization with Python is part of the larger IBM Data Science Professional Certificate. Your 7-day free trial includes:

- ✓ **Unlimited access to all courses in the Certificate**
Watch lectures, try assignments, participate in discussion forums, and more.
- ✓ **Cancel anytime.**
No penalties - simply cancel before the trial ends if it's not right for you.
- ✓ **\$39 USD per month to continue learning after trial ends.**
Go as fast as you can - the faster you go, the more you save.
- ✓ **Certificate when you complete.**
Share on your resume, LinkedIn, and CV.

[Start Free Trial](#)

[Audit the course](#)

Coursera Course Link 3: Data Visualization

<https://www.coursera.org/learn/python-for-data-visualization?specialization=ibm-data-science>

Coursera Course Link 4: ML w/ Python

<https://www.coursera.org/learn/machine-learning-with-python?specialization=ibm-data-science>

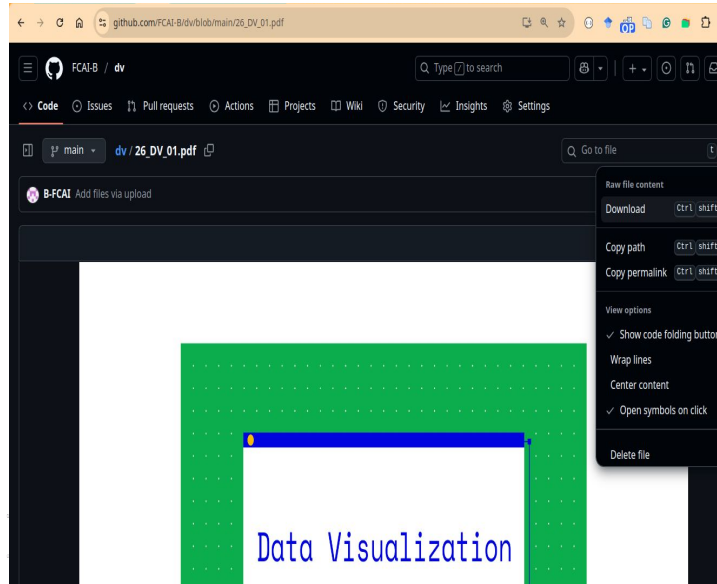


Questions

Links

<https://github.com/fcai-b/dv>

Download Course Materials: GUI



Download Course Materials: CLI

```
git clone https://github.com/fcai-b/dv
```

References

1. <https://www.udacity.com/blog/2018/01/4-types-data-science-jobs.html>
 - o 4 Types of Data Science Jobs
2. <https://www.coursera.org/articles/data-analyst-vs-business-analyst>
 - o Data Analyst vs. Business Analyst
3. <https://www.coursera.org/articles/business-intelligence-analysts-what-they-are-and-how-to-become-one>
 - o What Is a Business Intelligence Analyst?
4. <https://learn.365datascience.com/courses/intro-to-data-and-data-science>
 - o 365 Data Science - Introduction to Data and Data Science