Université Saint-Joseph de Beyrouth
Faculté des sciences

BACHELOR IN MATHEMATICS

Option : DATA SCIENCE

What are « Big Data »?

Nowadays, we produce huge amounts of data, from a wide variety of sources such as social networks, GPS, credit card payments, online shopping, video streaming sites, databases at companies and industries, connected devices,…

The numbers are monstrous. For example, we upload 55 million photos daily; we publish 340 million tweets and one billion documents. In all, we produce approximately 2.5e18 bytes every day.

These are called big data. Data science is the discipline that combines mathematics with computer science and different other tools in order to analyze big data.

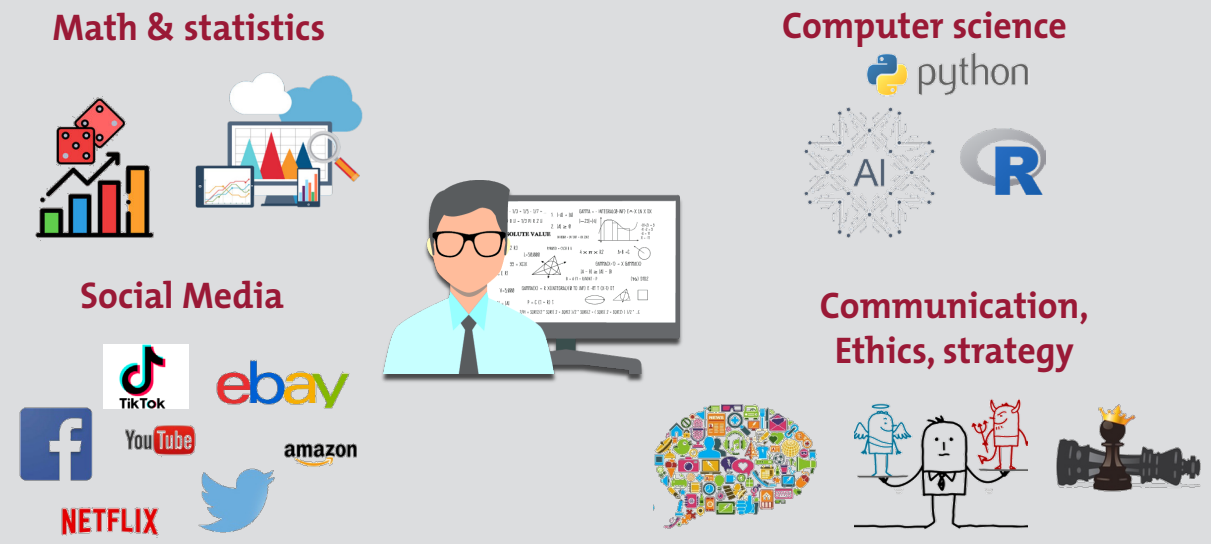
What does a Data Scientist do?

The work of a Data Scientist combines statistical analyzes, mathematical calculations and computer algorithms to process data and to extract meaningful insights out from them. A Data Scientist can give advice and establish strategies for companies to meet the needs of the customers.

Transforming big data into smart data requires several steps:

- Understanding the context of the problem.
- Collecting and analyzing data using mathematical techniques.
- Processing the analysis with suitable computer algorithms.
- Communicating the results to decision makers.

Since its creation, the job of a Data Scientist has always been ranked among the top 3 jobs around the globe. The demand on Data scientists is growing fast and in the future, this job is expected to offer great opportunities.



The program is open to all Baccalaureate categories: Lebanese, French & International of all sections (GS, LS, SE), without admission exam and is available at the 4 campuses of USJ:

- Campus of Science and Technologies (Mkalles)
- Campus of North Lebanon (Tripoli)
- Campus of South Lebanon (Saida)
- Campus of Zahleh and the Bekaa (Zahleh)

About the Bachelor program at USJ

The major provides students with the key competencies required to process data.

It includes a panoply of multidisciplinary subjects such as:

- Mathematical analysis
- Probability and statistics
- Big Data
- Data mining
- Programming in different languages: Python, R, C++, JS…
- Artificial intelligence and Machine learning

In addition to a variety of elective courses the student can choose.

Faculté des sciences
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