Answer 1:

Firstly, From the Obama's speech, we know that Obama encourages data scientists to build digital services for American people from health care and climate change so that it could save lives, and create new jobs and opportunities. Because something has happened, for example, someone claimed data scientist is the sexiest job in 21st century, companies and organizations use data and apply data to everyday life which creates real value through the innovation of data. Therefore, Obama is the most data-driven President, he had done a lot of things to facilitate the development of the data science, for instance, establishing government database to the public, helping IT investment create Federal level dashboards, investing in research and data science and so forth. The goal is that unleashing the massive amounts of data to the public for the benefits and maximize return on investment in data. Finally, to accomplish the object and achieve data-driven, organizations should use data to develop new products, while the government should try to release data in transparency, machine readable,efficient way.

Answer 2:

In the DIKW Pyramid model, we can find that information comes from data, knowledge comes from information, and wisdom comes from knowledge. At first, data is just a set of signals or symbols like the raining day which is unorganized. Scientists could get useful information from these data. They could transform these data into information using multiple methods. Data is what the data means. A further example is that scientists could know the temperature and humidity from the raining day. After that, knowledge is the next step. This step needs our learning to understand, detect patterns of the information. Scientists also need to build a predictive model to generate insights. For instance, the reason how the moisture and rain formed. The last step is wisdom. It allows us to predict the future correctly. In this example, the scientist could use observations and maths model to predict when it will rain again.

Answer 3:

- Data sets: Data sets mean a collection of data, it corresponds to data set tables which share the same set of attributes or properties as others in the same data set.
- Machine Learning: Machine learning is a type of artificial intelligence algorithms which provide computer the ability to learn without programming.
- Business Intelligence: Business intelligence means a data-driven process for analyzing data and presenting information to help make the decision making.

Answer 4:

The foundational methodology for data science which has 10 stages is a methodology for problem solving. Among the stages, data requirements is a step which is different from the 4 DS process described in the question.

Data requirements determined by the choice of analytic approach. “The analytic methods particular data content and domain knowledge”.[1]

References:

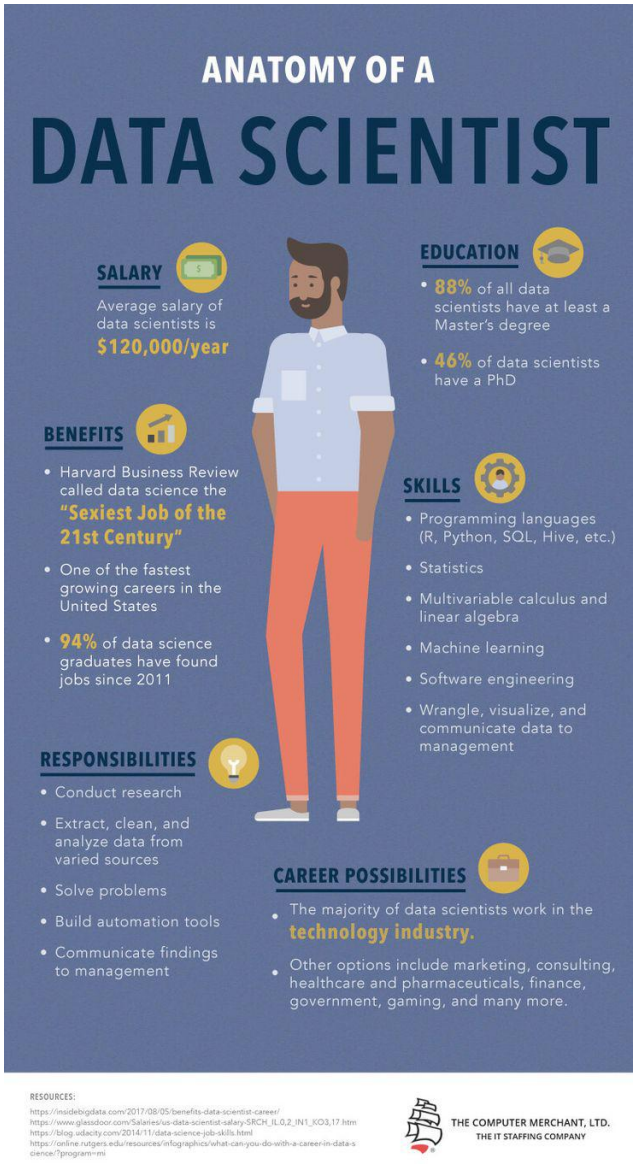
[1]John Rollins. (2015, August 24). Why we need a methodology for data science. [Web log post]. Retrieved from https://www.ibmbigdatahub.com/blog/why-we-need-methodology-data-science

Answer 5:

Data analytics means analyzing row data with the purpose of to identify patterns or relationships, and it often studying historical data. While data analysis is the process of handling data in a way that is useful to non-technical people. Data mining is defined as the process of discovering patterns in data. In my point of view, people should apply the data mining methods to data so that they could find the relationships or patterns in the data set. Consequently, data mining is one of the procedures in data analytics.

Answer 6:

In my opinion, the picture which I cited is very interesting.[1] Because the figure introduces the basic information of data scientists like average salary, basic skills, and responsibilities. Maybe it is just a profile of data scientists, but it could offer a useful career introduction to users.



References:

[1]LastStepPin. (2019, July 8). Anatomy Of A Data Scientist Infographic. [Website]. Retrieved from: https://www.laststeppin.com/share/pin-it/30995/2019/