**Tutorial 1 – Data Science, Big Data and Data Driveness**

**Instruction:** You may work in pairs. Only one submission. Write both of your names and matric numbers on the answer document. Submit the answer on Spectrum Submission Space.

1. Study a few definitions on data science and then come up with your own definition.

**Answer:** I have gone through 3 sites for the definition of data science and my understanding after reading them is data science is a combination of several disciplines such as using scientific methods to handle data, math, statistics, programming, and sometimes we need the field expert which can be from any background. Data science the study of data to understand and bring useful meaning out the data.

1. Distinguish between data analysis, data analytics and data mining. Illustrate how these three related to each other.

**Answer:** Data mining the process of collecting, refining and managing data. Data mining analyzing the structure of the data, how to use and handle the data. Whereas data analysis is the process of handling the data and extracting the useful information according to the meaning of the data.

1. Besides datafication of words, location and interaction, what else could be datafied? List TWO with examples.

**Answer:**

1. How could Big Data be applied in improving health, especially during the Covid-19 pandemic?

**Answer:** The use of Big Data can help the government to tackle

1. Identify TWO data-driven activities.

**Answer:** and civil engineering. Engineers collect vast amount of data from land surveys, soil composition and other data to make the right decision on the planning of the houses, building, bridges.

1. You have heard the term “insights” mentioned a lot in data science. Discuss the meaning of insights and present ONE example of it.

**Answer:** Insights are the understating of anything in a deeper sense. A vision in what the thing is telling us rather than seeing the object as it. For example, data from the student record of UM, when we view the data, they are just student information. If we do some exploratory data analysis, we might be able to see some patterns which can tell a story behind several issues that can be avoided. The patterns would help us make judgement on changing the policy that would improve the quality of education. The pattern is an insight from the data which was just laying down all this while.

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