

Chapter - 6

Introduction to Data Science

Q₁ What is data science? State any three advantages of data science?

Ans 1- Data Science is the study of available data to extract meaningful information for better decision making.

→ Advantages of data science-

1. Improved decision making.
2. Wide range of application.
3. Career ~~opport~~ opportunities.

Q₂ Explain any two application of data science?

Ans 2- Search Engine

The search engine is an application software that helps searching information on any topic.

Ex- Google, Yahoo, Bing etc.

Face Recognition

Data Science also plays an vital role in image recognition. When you upload photos on any social

media platform, it automatically highlights faces and gives suggestion for tagging who is in the picture.

Q3 How is data science useful in ride sharing applications?

Ans 3 - Big data and data science algorithms are the basic foundations of ride sharing applications like Uber and ola. These companies use a mixture of internal and external data to estimate fares ~~as~~ automatically using street traffic data, GPS data etc.

Q4 Explain the stages of a data Science life cycle?

Ans 4 - Data Science life cycle has 5 stages

- Stage 1 $\Rightarrow$ Obtain $\Rightarrow$ Refers to extracting data from various sources as apps, & websites.
- Stage 2 $\Rightarrow$ Scrub $\Rightarrow$ Converting the collecting data into a format that the machine understands.
- Stage 3 $\Rightarrow$ Explore $\Rightarrow$ Refers to extracting patterns within the data.

- Stage 4 $\Rightarrow$ Model $\Rightarrow$ After the data is extracted, a data model is prepared.
- Stage 5 $\Rightarrow$ Interpret $\Rightarrow$ Refers to using the algorithms to train the models for representing the information in an easy-to-understand format.

Q5 Write any three technical skills required to be a data Scientist.

- Ans 5-1. Data mining and Processing.
2. Data manipulation and visualisation.
 3. Knowledge of Machine learning.