**Applications of Data Science**

Data Science is the deep study of a large quantity of data, which involves extracting some meaning from the raw, structured, and unstructured data. Extracting meaningful data from large amounts use processing of data and this processing can be done using statistical techniques and algorithm, scientific techniques, different technologies, etc. It uses various tools and techniques to extract meaningful data from raw data. Data Science is also known as the **Future of Artificial Intelligence**.

**For Example**, Jagroop loves books to read but every time he wants to buy some books he is always confused about which book he should buy as there are plenty of choices in front of him. This Data Science Technique will be useful. When he opens Amazon he will get product recommendations on the basis of his previous data. When he chooses one of them he also gets a recommendation to buy these books with this one as this set is mostly bought. So all Recommendations of Products and Showing sets of books purchased collectively is one of the examples of Data Science.

**Real-world Applications of Data Science**

**1. In Search Engines**

The most useful application of Data Science is Search Engines. As we know when we want to search for something on the internet, we mostly use Search engines like Google, Yahoo, Safari, Firefox, etc. So Data Science is used to get Searches faster.

**For Example,** When we search for something suppose “Data Structure and algorithm courses ” then at that time on Internet Explorer we get the first link of GeeksforGeeks Courses. This happens because the GeeksforGeeks website is visited most in order to get information regarding Data Structure courses and Computer related subjects. So this analysis is done using Data Science, and we get the Topmost visited Web Links.

**2. In Transport**

Data Science is also entered in real-time such as the Transport field like Driverless Cars. With the help of Driverless Cars, it is easy to reduce the number of Accidents.

**For Example,** In Driverless Cars the training data is fed into the algorithm and with the help of Data Science techniques, the Data is analyzed like what as the speed limit in highways, Busy Streets, Narrow Roads, etc. And how to handle different situations while driving etc.

**3. In Finance**

Data Science plays a key role in Financial Industries. Financial Industries always have an issue of fraud and risk of losses. Thus, Financial Industries

needs to automate risk of loss analysis in order to carry out strategic decisions for the company. Also, Financial Industries uses Data Science Analytics tools in order to predict the future. It allows the companies to predict customer lifetime value and their stock market moves.

**For Example,** In Stock Market, Data Science is the main part. In the Stock Market, Data Science is used to examine past behavior with past data and their goal is to examine the future outcome. Data is analyzed in such a way that it makes it possible to predict future stock prices over a set timetable.

**4. In E-Commerce**

E-Commerce Websites like Amazon, Flipkart, etc. uses data Science to make a better user experience with personalized recommendations. **For Example,** When we search for something on the E-commerce websites we get suggestions similar to choices according to our past data and also we get recommendations according to most buy the product, most rated, most searched, etc. This is all done with the help of Data Science.

**5. In Health Care**

In the Healthcare Industry data science act as a boon. Data Science is used for:

• Detecting Tumor.

• Drug discoveries.

• Medical Image Analysis.

• Virtual Medical Bots.

• Genetics and Genomics.

• Predictive Modeling for Diagnosis etc.

**6. Image Recognition**

Currently, Data Science is also used in Image Recognition. **For Example,** When we upload our image with our friend on Facebook, Facebook gives suggestions Tagging who is in the picture. This is done with the help of machine learning and Data Science. When an Image is Recognized, the data analysis is done on one’s Facebook friends and after analysis, if the faces which are present in the picture matched with someone else profile then Facebook suggests us auto-tagging.

**7. Targeting Recommendation**

Targeting Recommendation is the most important application of Data Science. Whatever the user searches on the Internet, he/she will see numerous posts everywhere. This can be explained properly with an example: Suppose I want a mobile phone, so I just Google search it and after that, I changed my mind to buy offline. In Real -World Data Science helps those companies who are paying for Advertisements for their mobile. So everywhere on the internet in the social media, in the websites, in the apps everywhere I will see the

recommendation of that mobile phone which I searched for. So this will force me to buy online.

**8. Airline Routing Planning**

With the help of Data Science, Airline Sector is also growing like with the help of it, it becomes easy to predict flight delays. It also helps to decide whether to directly land into the destination or take a halt in between like a flight can have a direct route from Delhi to the U.S.A or it can halt in between after that reach at the destination.

**9. Data Science in Gaming**

In most of the games where a user will play with an opponent i.e. a Computer Opponent, data science concepts are used with machine learning where with the help of past data the Computer will improve its performance. There are many games like Chess, EA Sports, etc. will use Data Science concepts.

**10. Medicine and Drug Development**

The process of creating medicine is very difficult and time-consuming and has to be done with full disciplined because it is a matter of Someone’s life. Without Data Science, it takes lots of time, resources, and finance or developing new Medicine or drug but with the help of Data Science, it becomes easy because the prediction of success rate can be easily determined based on biological data or factors. The algorithms based on data science will forecast how this will react to the human body without lab experiments.

**11. In Delivery Logistics**

Various Logistics companies like DHL, FedEx, etc. make use of Data Science. Data Science helps these companies to find the best route for the Shipment of their Products, the best time suited for delivery, the best mode of transport to reach the destination, etc.

12. **Autocomplete**

AutoComplete feature is an important part of Data Science where the user will get the facility to just type a few letters or words, and he will get the feature of auto-completing the line. In Google Mail, when we are writing formal mail to someone so at that time data science concept of Autocomplete feature is used where he/she is an efficient choice to auto-complete the whole line. Also in Search Engines in social media, in various apps, AutoComplete feature is widely used.