**Data Science:**

Data Science is a multidisciplinary approach that combines principles and practices from the fields of mathematics, statistics, artificial intelligence, and computer engineering to analyze large amounts of datato extract meaningful insights for business.

**Artificial Intelligence:**

Artificial intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions.

**Machine Learning:**

Machine learning is **a branch of artificial intelligence (AI) and computer science which focuses on the use of data and algorithms to imitate the way that humans learn, gradually improving its accuracy**

**Future of Data Science & Real Life Example:**

**The future of data science is bright, and with increased applications across domains, its prospects are immense**. Along with artificial intelligence and machine learning, data science will contribute towards a higher level and intelligent decision-making for businesses.

Real Life Example:

1. **Video on You Tube: Youtube automatically suggests the related video when we watch any type of video.**
2. **Social media: Friend suggestion on facebook .**
3. Uber employ data science to improve price and delivery routes, as well as optimal resource allocation, by combining numerous factors such as consumer profiles, geography, economic indicators, and logistical providers.
4. Banks, for example, utilize sophisticated machine-learning algorithms to detect fraud based on a user's usual financial activity.
5. **Advertisement on various websites uses data science to show related add to the viewer.**

**Why Python is so popular and Future of Python?**

1. Python is easy to learn

2. Python has an active, supportive community

3. Python is flexible

4. Python offers versatile web-development solutions

5. Python is well suited to data science and analytics

6. Python is efficient, fast, and reliable

7. Python is widely used with IoT Technology

8. Python empowers custom automation

9. Python is the academic language

**Future of Python:**

**Python is growing as a rapid pace.** As per the recent study and career research, it was mentioned that there are **more or less 40,000 jobs**that are completely for python experienced software developers in many countries. Besides, search tags are also higher for python on different platforms. It is said that Data science collaborated with python has a great job and upcoming future taking one to a new edge.

Why python is good for data analytics?

Python is good for data analytics because Python works well on every stage of data analysis. there are many libraries that make Python more preferred for data analysis. For example, Scrapy and BeautifulSoup libraries are used for data mining, NumPy and Pandas are used for Data Processing And Modelling and Matplotlib and Seaborn are widely used for Python data visualization.