

Name: Kadam Mahesh
Roll No: CS8-71
PRN: 202401120074

Q. Write any 3 applications of Data science

→ mention libraries of python for mathematical operations array / list to draw the graph, chart etc.

⇒ 1. Healthcare: Data science is revolutionizing healthcare by enabling predictive analytics for patient outcomes, personalized management of healthcare resources. For example, machine learning models can predict disease outbreaks, recommend treatment plans based on patient history, and optimize hospital operations.

2. Finance: In financial sector, data science is used for risk management, fraud detection, algorithmic trading and customer segmentation. By analyzing large volumes of transaction data, financial institutions can indicate fraudulent activity, assess credit risk, and tailor financial products to individual customer needs.

3 . Name : kadam Mahesh

Roll No : CS8 - 71

PRN : 2024 011 20074

3 . E-commerce : Data science drives

recommendation systems, Customer behavior analysis, and inventory management in e-commerce. Platforms like Amazon and Netflix use data science to recommend products or content based on user preferences and past behavior, enhancing customer experience and increasing sales. Additionally, predictive analytics helps in managing inventory levels and optimizing supply chains.

These applications demonstrate the versatility and impact of data science across various industries.

Name : Kadam Mahesh

Roll No : CS8-71

PRN : 202401120074



Mathematical Operations :

1. Numpy

- * A fundamental library for numerical computations in Python.
- * supports arrays, matrices, and mathematical functions like linear algebra, Fourier transforms, and random number generation.

2. Scipy

- * Built on Numpy, it provides additional functionality for science computing, including optimization, integration, interpolation, and statistics.

3. Sympy

- * A library for symbolic mathematics, including algebra, calculus, and equation solving.

4. Pandas :

* While primarily used for data manipulation it also supports mathematical operations on data frames and series.

5. Math :

* A built-in Python library for basic mathematical functions like trigonometry, logarithms and constants.