TASK NO: 3

TASK NAME: **Data Scientist Roles Research**

**THREE KEY ROLES:**

**1.Data Analysis & Interpretation**

Data analysts examine datasets to identify trends and make informed business decisions. They play a significant role in transforming raw data into meaningful information

* Collect, clean, and preprocess large datasets to uncover insights.
* Use statistical techniques and data visualization tools to interpret trends.

**2.Machine Learning Engineer**

A machine learning engineer designs and implements machine learning models and algorithms that leverage large data sets.

* Develop and train ML models to make accurate predictions and automate decision-making.
* Optimize algorithms for better performance and scalability.

**3. product manager**

A product manager oversees the development and delivery of products, ensuring they meet customer needs and business goals.

* Analyzing market trends, customer needs, and competitor products to inform product strategy.
* Working with design, engineering, marketing, and sales teams to develop and launch products.
* Overseeing the entire product lifecycle, from initial concept through development, launch, and post-launch analysis.

**RESPONSIBILITIES :**

1. **Data Collection & Processing** – Gathering and cleaning large-scale data for training ML models.
2. **Model Development** – Implementing ML algorithms and deep learning architectures for specific tasks.
3. **Deployment & Optimization** – Deploying models into production and fine-tuning them for scalability and efficiency.
4. **Model Monitoring & Maintenance** – Ensuring models continue to perform well with real-time data and evolving requirements.
5. **Collaboration with Cross-functional Teams** – Working alongside data scientists, software engineers, and business stakeholders to align AI solutions with business goals