Differentiate between data engineer, data analyst, data scientist, machine learning specialist.

- ***Data Engineering Responsibilities?***
  - *Design and develop data models for data warehouses, data lakes, and other data storage solutions.*
  - *Develop ETL (Extract, Transform, Load) processes to move data from source systems to target systems.*
  - *Monitor and maintain the performance of existing data pipelines.*
  - *Collaborate with other teams such as software engineering, business intelligence, analytics, and product management to ensure that the right data is available for analysis and decision-making purposes.*
  - *Research new technologies related to big data processing, machine learning, artificial intelligence, etc…..*
- ***Data Analyst Responsibilities?***
  - *Analyze large datasets using statistical techniques to find patterns and trends.*
  - *Develop reports and visualizations to communicate insights from the analysis.*
  - *Clean datasets by identifying inconsistencies or errors in the data (missing Value & Irrelevant data & Duplicate Data & outliers).*
  - *Develop predictive models using machine learning algorithms.*
  - *Collaborate with stakeholders to understand their needs and develop appropriate solutions.*
  - *Monitor performance of existing models and optimize them for accuracy or efficiency.*

- ***Data Scientist Responsibilities?***
  - ⇨ ***A data scientist combines the skills of a statistician, computer scientist, and domain expert to analyze complex datasets. They use machine learning algorithms to uncover insights from the data and create predictive models.***
    - ➢ *Interpreting results using a variety of techniques, ranging from simple data aggregation to complex statistical analysis.*
    - ➢ *Creating visualizations to present results in an easy-to-understand format for stakeholders and clients.*
    - ➢ *Developing processes and tools to monitor and analyze model performance and data accuracy.*
    - ➢ *Collaborating with teams to Push company data to business solutions.*
    - ➢ *Communicating insights in a clear to stakeholders.*
- ***Machine Learning Specialist Responsibilities?***
  - ⇨ ***A machine learning specialist is responsible for developing algorithms that can learn from data without being explicitly programmed. They use techniques such as supervised learning, unsupervised learning, reinforcement learning, and deep learning to build models that can make predictions or decisions based on input data.***
    - ➢ *Design machine learning algorithms for various applications such as natural language processing (NLP), computer vision, etc.*
    - ➢ *Train machine learning models on large datasets using supervised or unsupervised techniques.*
    - ➢ *Optimize existing models for accuracy or efficiency by tuning hyperparameters or feature engineering techniques.*
    - ➢ *Deployment trained models into production environment for real-time predictions or processing tasks.*