

## TASK 3: Data Scientist Roles Research

### 1. Data Analyst

- **Description:** A Data Analyst focuses on interpreting data to provide actionable insights. They work with large datasets to identify trends, create visualizations, and generate reports that help businesses make informed decisions.
  - **Responsibilities:**
    - o Collect, clean, and preprocess data from various sources.
    - o Perform exploratory data analysis (EDA) to uncover patterns and trends.
    - o Create dashboards and reports using tools like Tableau, Power BI, or Excel.
    - o Collaborate with stakeholders to understand business needs and provide data-driven recommendations.
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### 2. Machine Learning Engineer

- **Description:** A Machine Learning Engineer designs, builds, and deploys machine learning models to solve complex problems. They bridge the gap between data science and software engineering.
  - **Responsibilities:**
    - o Develop and optimize machine learning algorithms and models.
    - o Preprocess and transform data for model training.
    - o Deploy models into production environments and monitor their performance.
    - o Collaborate with data scientists and software engineers to integrate ML solutions into applications.
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### 3. Business Intelligence (BI) Specialist

- **Description:** A BI Specialist focuses on transforming raw data into meaningful insights to drive strategic business decisions. They use data visualization and reporting tools to communicate findings effectively.
- **Responsibilities:**
  - o Design and maintain BI systems and data warehouses.
  - o Create interactive dashboards and reports for stakeholders.
  - o Analyze business performance metrics and provide actionable insights.
  - o Ensure data accuracy and consistency across reporting platforms.