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### Task 3: Data scientist roles research

#### **Data Collection and Cleaning:**

Data scientists gather large amounts of structured and unstructured data from various sources. They clean and preprocess this data to ensure its quality and usability

#### **Exploratory Data Analysis (EDA):**

They perform EDA to understand the underlying patterns, trends, and relationships within the data. This helps in identifying key insights and potential areas for further analysis.

#### **Building Predictive Models:**

Data scientists develop and implement machine learning algorithms and statistical models to make predictions and solve complex business problems. These models can be used for tasks such as forecasting, classification, and clustering

#### **Communication and Collaboration:**

Data scientists work closely with other teams, such as business analysts, engineers, and executives, to understand their needs and provide data-driven solutions. They communicate their findings and recommendations effectively to both technical and non-technical audience

#### **Finance and Banking:**

In the financial sector, data science is used for fraud detection, risk management, and algorithmic trading. By analyzing transaction data, banks can identify suspicious activities and prevent fraud. Predictive models help in assessing credit risk, and data-driven trading algorithms can execute high-frequency trades to maximize profits

#### **Continuous Learning:**

The field of data science is constantly evolving, so data scientists need to stay updated with the latest tools, techniques, and industry trends. They often engage in continuous learning and professional development