



# Assignment 03

CSC557- Data Analysis Decision Making  
and Data Visualization

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MS in Physics-Analytics for Large  
Data Sets

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1. What is the role of a data analyst, a data engineer, and a data scientist. Describe each position. Describe how they compliment each other?

Role of Data Analyst:

- ⇒ Using advanced computerised models to extract the data needed.
- ⇒ Removing corrupted data.
- ⇒ Performing initial analysis to assess the quality of the data.
- ⇒ Performing further analysis to determine the meaning of the data.
- ⇒ Performing final analysis to provide additional data screening.
- ⇒ Preparing reports based on analysis and presenting to management.

Role of Data Scientist:

- ⇒ Needs to determine how to use business data for important business decision.
- ⇒ Tries to find out new data source and determine their accuracy.
- ⇒ Analyze databases to simplify and improve product development, marketing techniques, and business processes.
- ⇒ Create new data models and algorithms.
- ⇒ Use predictive models to improve customer experience, making promotional offers, revenue generation, and more.
- ⇒ Coordinate with various technical/functional teams to implement models and monitor results.

Role of Data Engineer:

- ⇒ Make data accessible so that organizations can use it to better their performance.
- ⇒ Collection and management of data, converting it into useful information.
- ⇒ Build and maintain data pipelines and maintain databases.
- ⇒ Collaboration with management to perceive organizational goals.
- ⇒ Creation of new data validation processes and analytical tools.
- ⇒ Design, build, test, and maintain data management systems.