### The Data Science Process

St. Joseph's University, Bengaluru

Basics of Data Science

#### The Data Science Process

Setting the Research Goal  $\longrightarrow$  Retrieving Data  $\longrightarrow$  Data Preparation  $\longrightarrow$  Data Exploration  $\longrightarrow$  Data Modeling  $\longrightarrow$  Presentation

# Setting the Research Goal

### Prepare a Project Charter

- 1. What will you research?
- 2. What Data?
- 3. Whatresources?
- 4. Timeline
- 5. Deliverable



## Retrieving Data



- 1. Government websites/databases
- 2. Built in data sets
- 3. https://www.kaggle.com
- 4. https://archive.ics.uci.edu/ml/index.php

# Data Preparation

- 1. Data Cleansing
- 2. Data Integration
- 3. Data Transformation



## **Data Exploration**

Primarily, data visualization techniques are used in this step. This step is also called Exploratory Data Analysis (EDA).



# Data Modeling and Model Building

This step has three phases:

1. Selecting Variables 2. Executing the model 3. Model Diagnosis

