

Data Preprocessing

Agenda



- 1. Data Preprocessing
- 2. Steps involved in model building

Questions to discuss



- 1. What is Data Preprocessing and what are the steps involved in it?
- 2. Why we need data preprocessing?
- 3. What are the steps involved in model building?

What is Data Preprocessing?



- Data preprocessing is a collective term used to describe a collection of approaches that help get the data ready for analysis
- It helps us clean and transform the raw data to an efficient format for analysis and modeling
- It is generally very contextual and requires good domain understanding to do this well
- Different datasets need different kinds of preprocessing





Broadly it is divided into the following steps:

- 1. Data format checks
 - a. Data dimension
 - b. Data types
- 2. Data Consistency
 - a. Missing, inconsistent, duplicate values
 - b. Outliers
 - Data distribution and skewness
- Feature Engineering
 - a. Variable transformations
 - b. Feature extraction

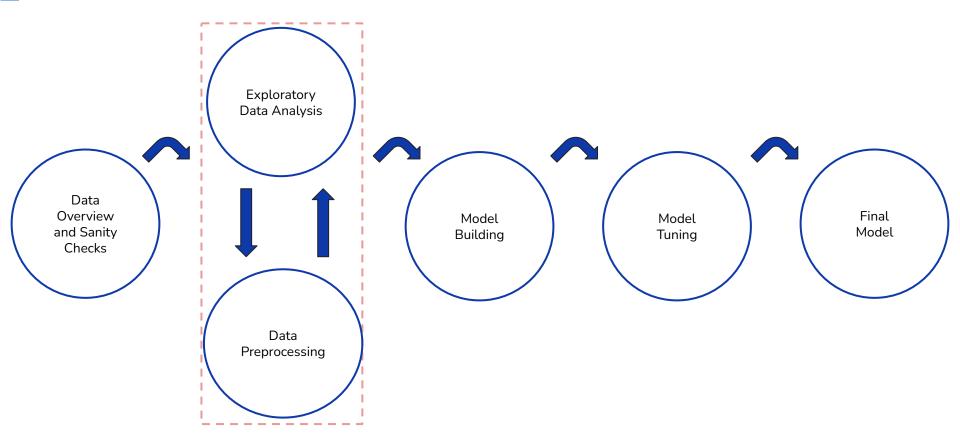


Why do we need Data Preprocessing?

- Data preprocessing is a crucial step in the cycle of building a model from raw data
- Data preprocessing takes up approximately 60-80% of the time in a modeling project
- We often need to iterate between exploratory data analysis and data preprocessing to obtain the optimal data to get the desired model performance
- Data preprocessing also helps us in case our model does not satisfy any underlying statistical assumptions



What are the steps involved in model building?



greatlearning Power Ahead

Happy Learning!

