

# **SNS COLLEGE OF TECHNOLOGY**

Kurumbapalayam (Po), Coimbatore – 641 035

**An Autonomous Institution**

Accredited by NAAC – UGC with ‘A++’ Grade

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai



## **DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

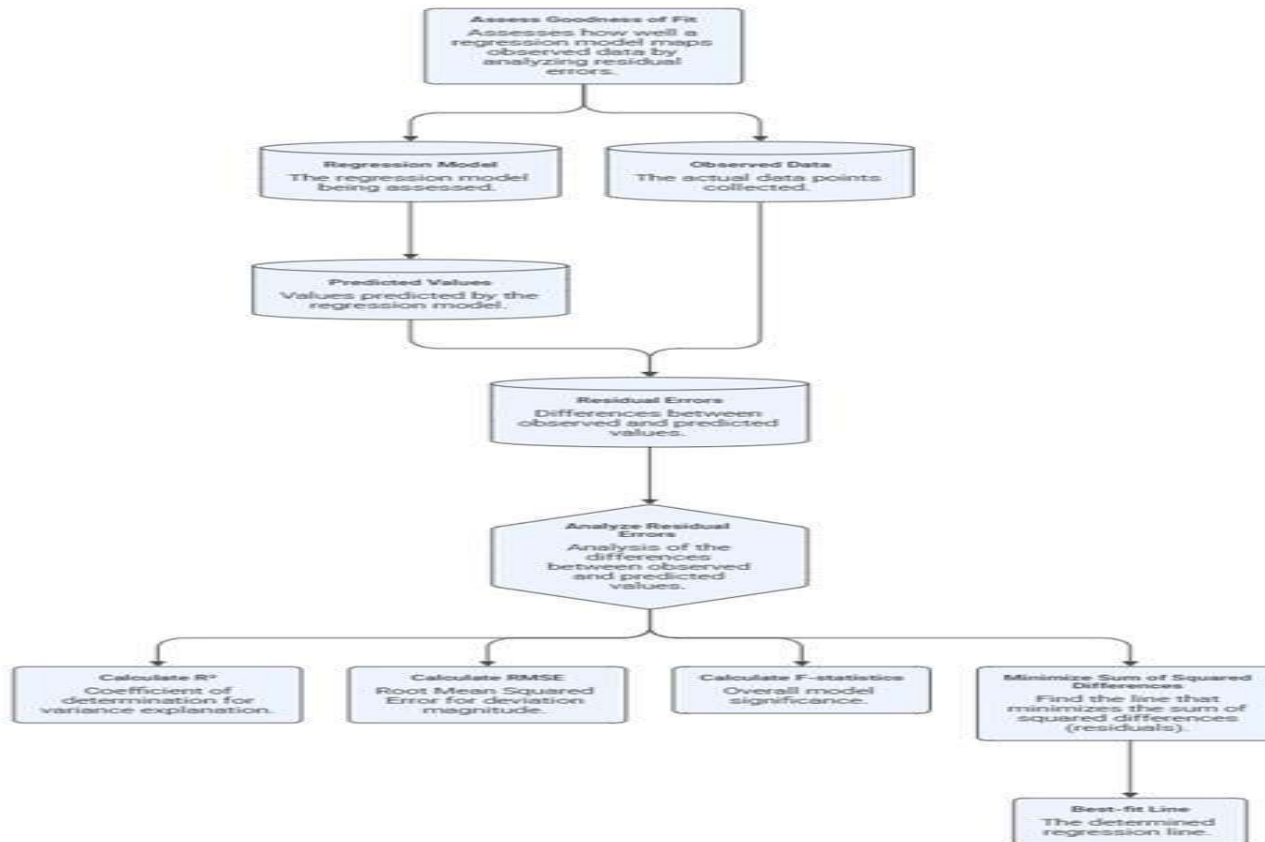
**COURSE NAME: 23ADO201- DATA SCIENCE FUNDAMENTALS  
(OPEN ELECTIVE )**

**III YEAR / VI SEMESTER**

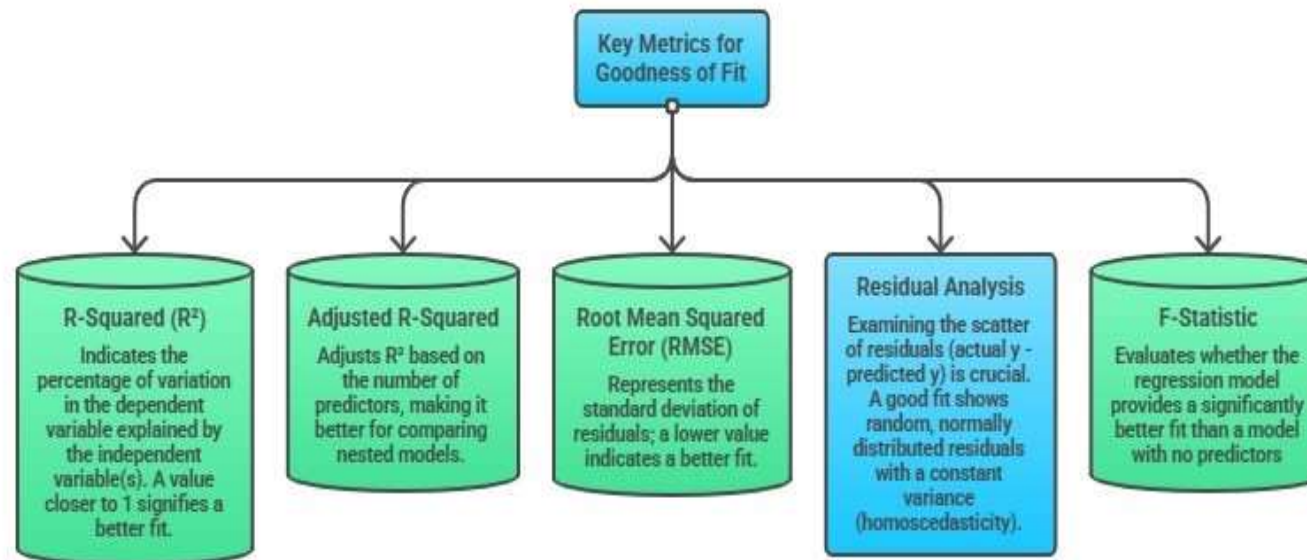
**Unit 5 - PREDICTIVE ANALYTICS**

**Topic : GOODNESS OF FIT IN LINEAR LEAST SQUARES**

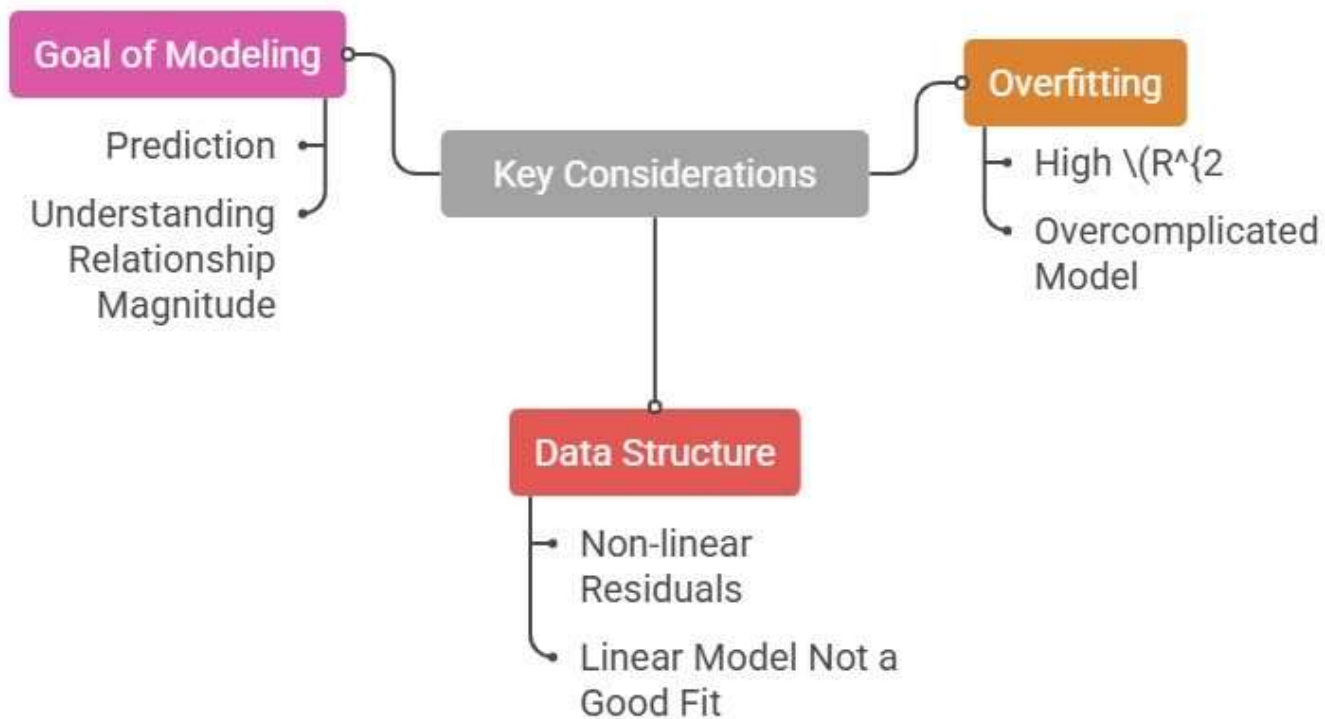
## Goodness of Fit in Linear Least Squares



## Key Metrics for Goodness of Fit



## Key Considerations in Model Fitting



## Activity



### ACTIVITY: Goodness of Fit in Linear Least Squares

#### Objective

To evaluate how well a linear model fits given data using  $R^2$  and error metrics.

Given Data

x	y
1	2
2	3
3	5
4	4
5	6

#### Student Tasks

1. Calculate slope and intercept manually
2. Verify results using Excel / Python
3. Compute  $R^2$  value
4. Interpret whether model is good or not

## MCQ



### MCQs on Goodness of Fit in Linear Least Squares:

#### 1. Goodness of fit refers to:

- A) Accuracy of input data
- B) How well the model fits the observed data
- C) Number of variables used
- D) Speed of computation

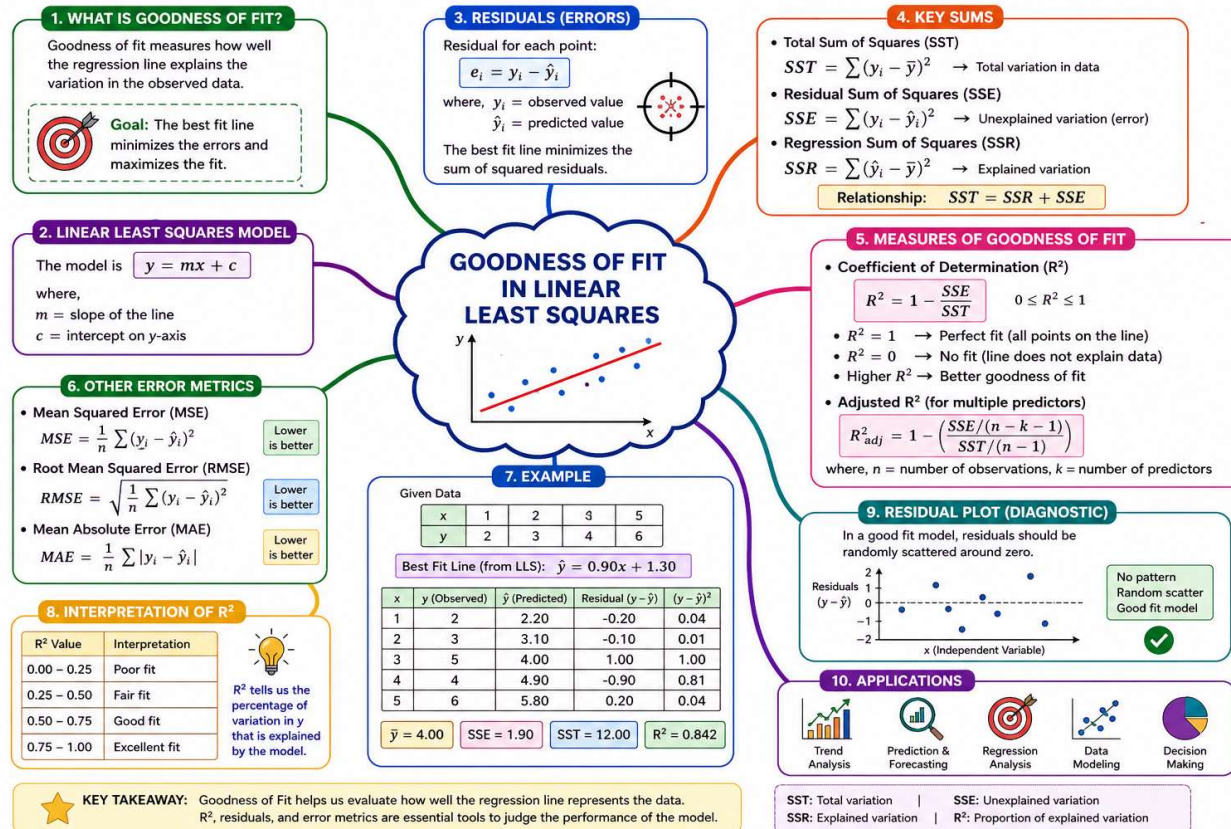
**Answer:** B) How well the model fits the observed data

#### 2. The most common measure of goodness of fit is:

- A) Mean
- B) Variance
- C)  $R^2$  (Coefficient of Determination)
- D) Median

**Answer:** C)  $R^2$  (Coefficient of Determination)

# MINDMAP



TEXT BOOKS	
1.	Srinivasan Desikan and Gopaldaswamy Ramesh, —Software Testing – Principles and Practices, Pearson Education, 2006.
REFERENCES	
1.	Ilene Burnstein, —Practical Software Testing, Springer International Edition, 2003
2.	Edward Kit, Software Testing in the Real World – Improving the Process, Pearson Education, 1995
3.	Boris Beizer, Software Testing Techniques – 2nd Edition, Van Nostrand Reinhold, New York, 1990.
4.	Aditya P. Mathur, —Foundations of Software Testing _ Fundamental Algorithms and Techniques, Dorling Kindersley (India) Pvt. Ltd., Pearson Education, 2008.

**THANK  
YOU!**

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