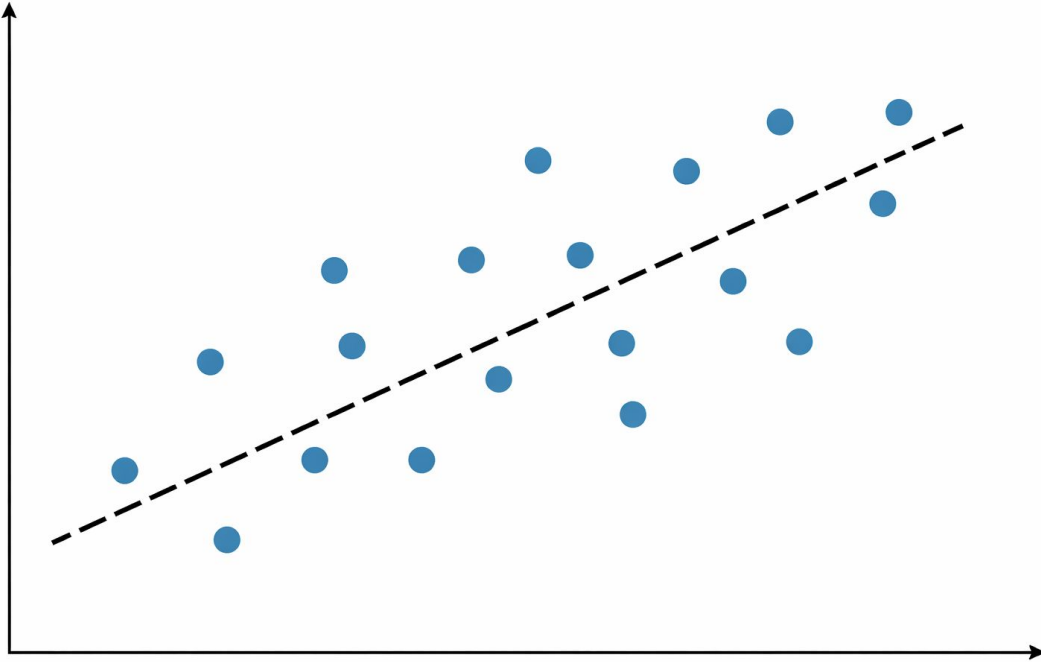


Introduction to AI Models

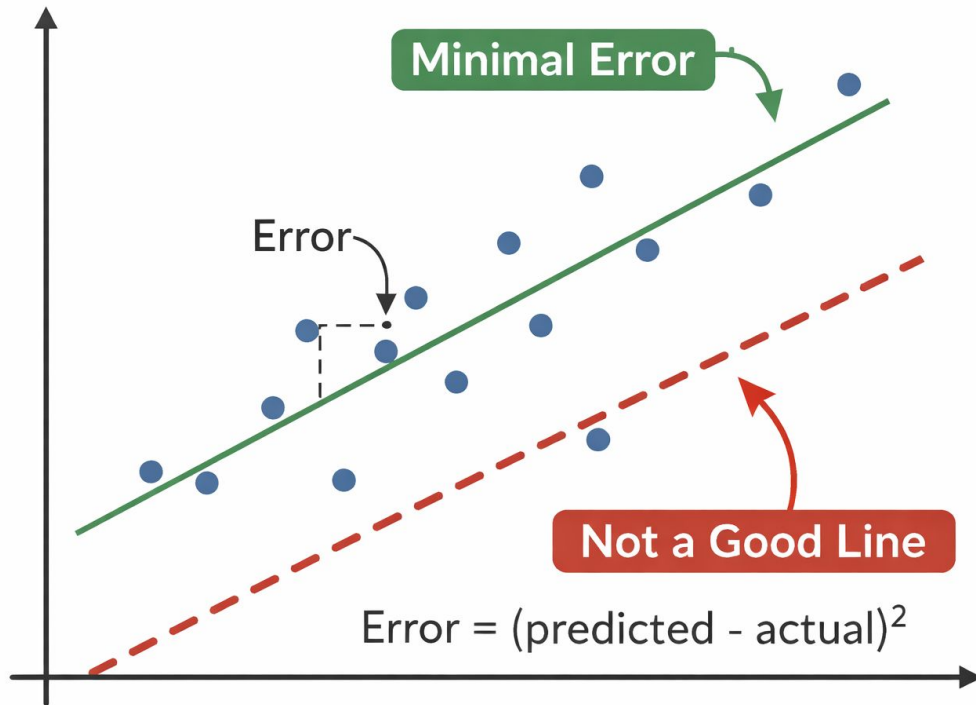
Rushikesh K. Joshi

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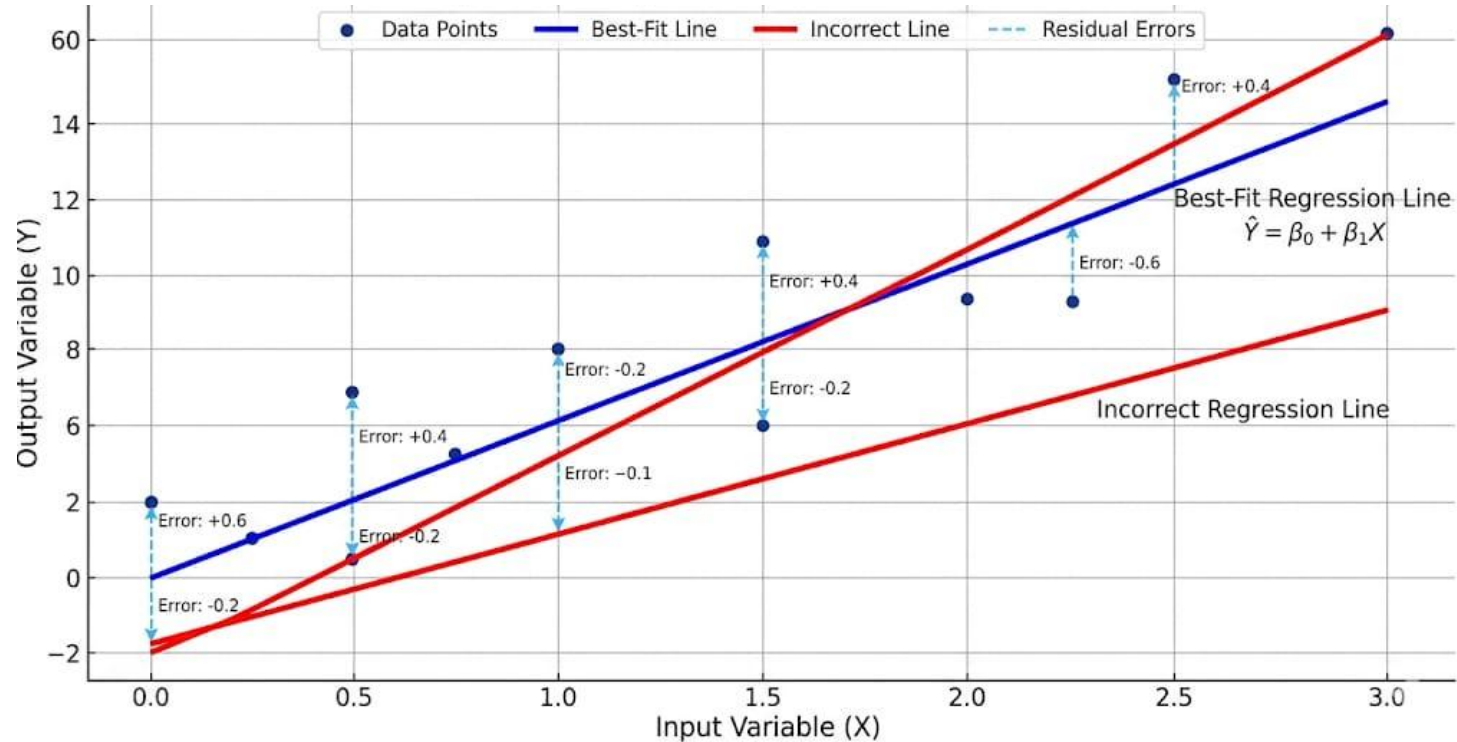
Linear Regression : Find a line $y = m.x + c$ which can predict the value of y given x [A Dataset in the Sheet]



Linear Regression: finding error



Linear Regression: possible lines and best fit



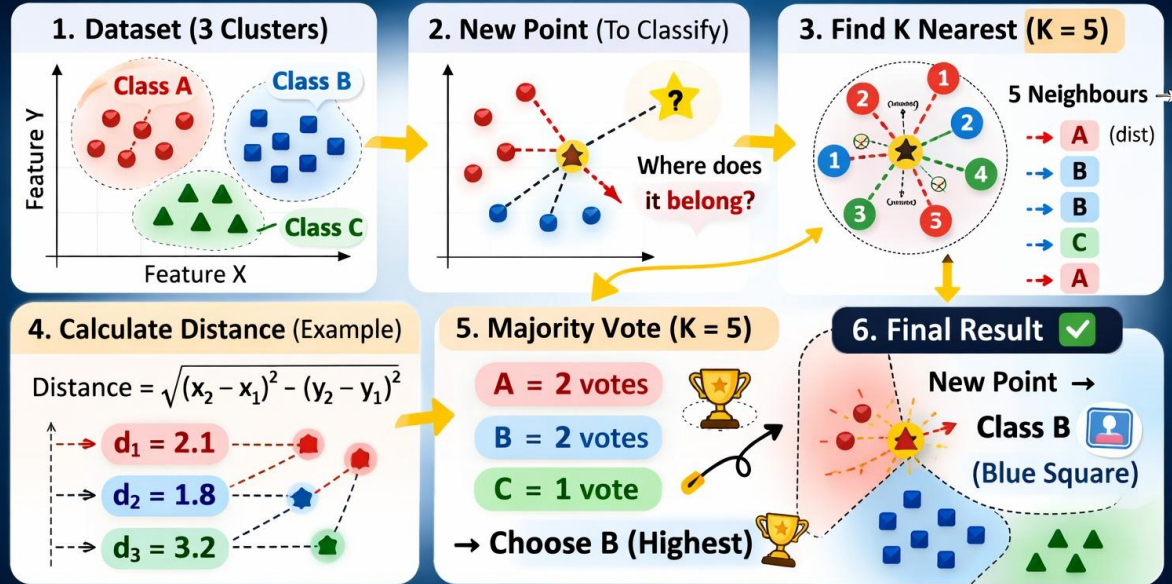
Decision Trees: An Sample Input (Full one in the sheet)

Age	Income	Student	Credit Rating	Buys Product
Young	High	No	Fair	No
Young	High	No	Excellent	No
Middle	High	No	Fair	Yes
Senior	Medium	No	Fair	Yes
Senior	Low	Yes	Fair	Yes
Senior	Low	Yes	Excellent	No
Middle	Low	Yes	Excellent	Yes
Young	Medium	No	Fair	No

Clustering

K-Nearest Neighbour (KNN) – Complete Visual Guide

💡 Idea: New Point → Find K Closest → Majority Vote → Assign Class!



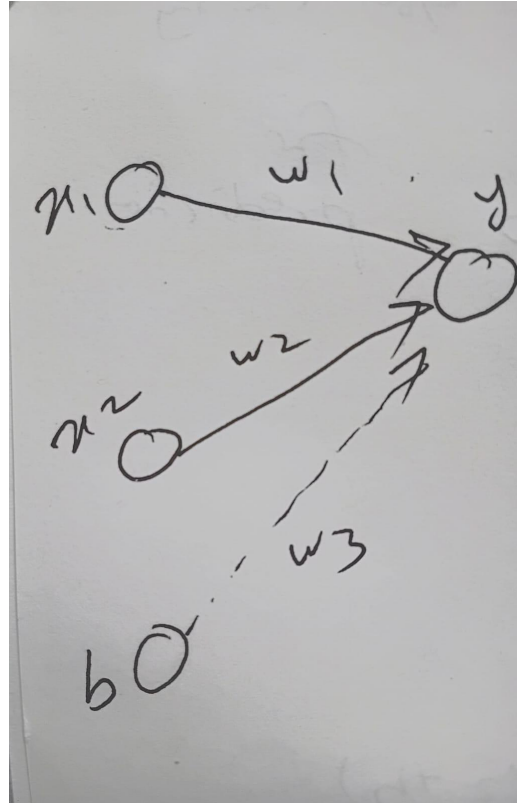
💡 Tip: Try different K (3,5,7...) → See how boundary changes!

K = 5

Thanks: slide contributed by Priya

Neural Network: Basic Network with weights and an activation function

1 1 1	10 0 110
1 0 1	11 1 101
0 1 1	00 0 011
0 0 0	01 0 000



Neural Networks: Adding a Hidden Layer

