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ML Experiment 2

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ML Experiment 2

Aim: To Implement & understand the basics of Logistic Regression.

Theory:
Logistic Regression is a supervised ML Algorithm used for classification task where the goal is to predict the probability that an instance belongs to a given class or not
It is a Statistical Algo which analyze the relation between two factors

Types of logistic Regression:

→ Binomial
→ Multinomial
→ Ordinal

$z = wx + b$
x: Independent inputs
b: biase term (intercept)
w: weights

Sigmoid function:
The output (z) is mapped to get the probability

$$\sigma(z) = \frac{1}{1 - e^{-z}}$$

logistic regression Equation

$$P(x, b, w) = \frac{1}{1 + e^{-wx+b}}$$

Evaluating Model Methods

- → Accuracy
- → Precision
- → Recall
- → F1 Score

Conclusion Thus, we implemented logistic Regression

Implementation: