

Minutes of Session 6

Linear Regression

Linear regression is the statistical method to find the relationship between dependent and independent variables. It consists of creating a best fit line which minimizes the error in the total sum of squares of residuals.

Conditions for Linear Regression Models

- Error terms are not supposed to be correlated.
- Should be able to formulate a linear relation.
- X and residual must not be correlated.
- Mean of residuals should be zero.

Residual

The perpendicular distance between the actual value of the data points and the predicted value.

Gradient Descent

It is an iterative algorithm for finding a local minimum of a differentiable multivariate function.

R^2 (Coefficient of Determination)

The coefficient of determination measures how well a model predicts an outcome.