Linear Regression

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What is Regression?

- Regression is analysis is a form of predictive modelling technique which investigates the relationship between a dependent and independent variable

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Uses of Regression

Three major uses for regression analysis are

1. Determining the strength of predictors
2. Forecasting an effect, and
3. Trend forecasting

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Linear vs Logistic Regression

Basis	Linear Regression	Logistic Regression
Core Concept	The data is modelled using a straight line	The probability of some obtained event is represented as a linear function of a combination of predictor variables
Used with	Continous Variables	Categorical Variable
Output/Prediction	Value of the variable	Probability of occurence of event
Accuracy and Goodnees of fit	Measured by loss, R squared, Adjusted R squared etc.	Accuracy, Precision, Recall, F1 score, ROC curve, Confusion Matrix, etc.

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The Bibliography

National Institute of Standards and Technology

NIST Available from World Wide Web: https://www.nist.gov/.

David Clifte da Silva Vieira e Renata Passos Machado

Abordagem a um classificador de dígitos manuscritos baseado em redes neurais.

VIICONNEPI - Congresso Norte Nordeste de Pesquisa e Inovação.

Patrick J. Grother, Visual Image Processing Group, Advanced Systems Division.

Handprinted Forms and Characters Database

NIST - National Institute of Standards and Technology.

MNISt data base.

Sample Images from MNIST test dataset.

MNIST Available from World Wide Web: https://en.wikipedia.org/wiki/MNIST_database.