

logistic regression

Logistic regression, also known as logistic regression analysis, is a generalized linear regression analysis model, which is often used in data mining, disease automatic diagnosis, economic forecasting and other fields.

Logistic regression and multiple linear regression models have a lot in common. They are basically the same, with $W'x+b$, where W and B are unknown parameters, the difference is due to their different variables. If it is continuous, that is, multiple linear regression, if it is the two distribution, that is the logistic regression.

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- Main application :
- For example, to explore the risk factors of disease, and predict disease occurrence probability according to the risk factors.
- In the gastric cancer analysis as an example, choose two groups, one group is a group of gastric cancer, a group of non cancer group, the two groups will have different signs and ways of living. Therefore the dependent variable is whether the gastric cancer, the value of "yes" or "no", you can include many variables, such as age, gender, diet, infection of *Helicobacter pylori*.

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- Independent variables can be continuous, can also be classified. And then through the logistic regression analysis, can get the variable weights, which can generally understand what factors are the risk factors of gastric cancer.
- At the same time according to the weight of a person suffering from cancer can be predicted according to the possibility of risk factors.