# PERCEPTRON ERROR FUNCTIONS

Activation Functions for discrete are step functions,while in continuos it is sigmoid function.

* Sigmoid function : sigmoid(x) =1/(1+e^-x)
* Softmax function :- If linear function scores are Z1,Z2….Zn then

Probability(class i) = e^Zi/(e^Z1 + … + e^Zn)

## ONE HOT ENCODING

* We can encode categorical values to numerical values
* Used in processing categorical data

## MAXIMUM LIKELIHOOD

* Maximises the probability
* Cross entropy = ,high entropy=> bad model ,low entropy => good model
* Multi class cross entropy = -

## GRADIENT DESCENT FORMULA

Derivative(Squared Error ) wrt weights = -(actual output-predicted output)\*derivative of activation function \* Xi