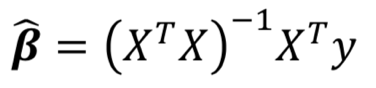
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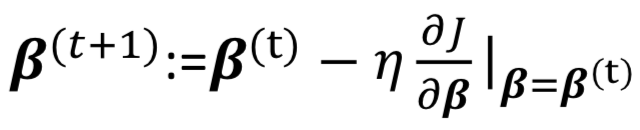
Name: Kanisha Shah

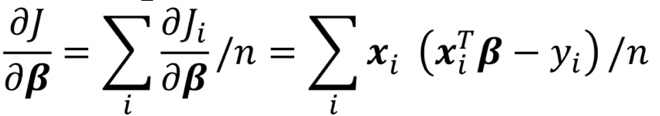
linearRegression.py

* β (Beta) in closed form solution is obtained using:



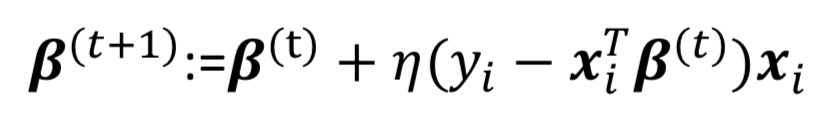
* β (Beta) in Batch Gradient Descent is obtained using:



η here is the learning rate and 

It is calculated until it converges.

* β (Beta) in Stochastic Gradient Descent is obtained using:



η here is the learning rate.

β is calculated to account for all n data points

logisticRegression.py

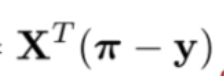
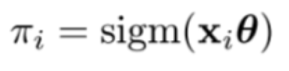
* avgLogL was calculated by following formula:



To obtain the average the formula L was divided by n (number of data points).

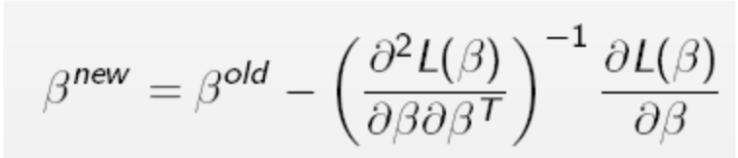
* Beta in getBeta\_BatchGradient was calculated by following formula:



Where partial derivative of L with respect to β is  , where

θ here refers to β.

* Beta in getBeta\_Newton was calculated by following formula:



Partial derivative of L with respect to β is calculated as in Batch Gradient.

Second partial derivative of L is  **- (X^T \* X) • (sig(X \* B) • (1 - sig(X \* B)))**.