

PYTHON PSEUDOKOD ZA LOGISTICKU REGRESIJU

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eta = 0.1
train = df(open("train.csv"))
# tu jos morate odvojiti training data ili input vektore od targeta
test = df(open("test.csv"))
number_of_weights = test.shape()[1]
W=[]
no_of_animals = train.shape[0]
for n in range(number_of_weights):
    W.append(0.5)
#dakle pocetni W ce biti [0.5,0.5,...,0.5]
outputs = [] # ovo su svi y-kapice
errors = []

def sigma(z):
    return 1 / (1+(2.71**(-z)))

def forwardPass(tezine, inputVektor, target):
    res = sigma(dot(tezine, inputVektor))
    err = 0.5*((target - res)**2)
    outputs.append(res)
    errors.append(err)
    return [res, err]

def BackProp(tezine, inputVektor, y_kapica, target):
    updateaneTezine = []
    for m in range(len(tezine)):
        curr_w = tezine[m]
        parDer = - inputVektor[m] * y_kapica * (1 - y_kapica) * (target - y_kapica)
        updateanWeight = curr_w - eta * parDer
        updateaneTezine.append(updateanWeight)
    return updateaneTezine

def Train(trainSet, weights, targets, N=2): #N je broj epoha
    W = []
    for n in range N:
        for k in range(no_of_animals):
            r = forwardPass(weights, trainSet[k], targets[k])
            W.append(BackProp(weights, trainSet[k], r[0], targets[k]))
    return W #W je lista listi tezina kroz epohe. Na zadnju referiramo s W[-1]

def Predict(tezine, inputVektori):
    predictions = []
    for k in inputVektori:
        res = sigma(dot(tezine, inputVektori[k]))
        predictions.append(res)
    return predictions

FINAL_W = Train(inputVektori, W, targeti, N=5)[-1]
PREDIKCIJE = Predict(FINAL_W, testVektori)
print(PREDIKCIJE)
```