

File - main

C:\Users\19282\Anaconda3\envs\deeplearning\python.exe C:/Users/19282/Documents/fall_22/DEEP_LEARNING/HW1/code/main.py

Binary logistic regression model with learning rate = 0.5 and max iterations = 100

results of batch gradient descent

[0.18761413 3.55944904 -2.06327285]

Training accuracy: 0.9444444444444444

validation accuracy: 0.955026455026455

results of mini batch but with batch size = number of samples(basically a batch gradient descent)

[0.18761413 3.55944904 -2.06327285]

Training accuracy: 0.9444444444444444

validation accuracy: 0.955026455026455

results of stochastic gradient descent

[10.85081118 31.97203196 1.92439998]

Training accuracy: 0.9718518518518519

validation accuracy: 0.9788359788359788

results of mini batch gradient descent with batch size = 1

[10.83530893 31.93536683 1.88053847]

Training accuracy: 0.9711111111111111

validation accuracy: 0.9788359788359788

results of mini batch gradient descent with batch size = 10

[5.03595495 23.55810744 -3.10690096]

Training accuracy: 0.9733333333333334

validation accuracy: 0.9735449735449735

test accuracy (best model with given parameters is chosen): 0.9393939393939394

Process finished with exit code 0