

# NESTEROV ACCELERATED GRADIENT DESCENT

$W, b = 2$  and learning rate = 10 and  $\gamma = 0.1$

$X = [0.5, 2.5]$

$Y = [0.2, 0.9]$

Max_epoch	VGD Loss	MGD Loss	NAG Loss
100	1.62 e -12	7.34 e -14	1.71 e -15
200	5.67 e -22	1.33 e -24	4.41 e -26
400	2.50 e -32	6.54 e -33	6.16 e -33
800	2.50 e -32	6.54 e -33	6.16 e -33
2000	2.50 e -32	6.54 e -33	6.16 e -33

So, Both momentum based gradient descent and nesterov accelerated gradient descent performs better than vanilla gradient descent.