

Epoch

One Epoch is when an ENTIRE dataset is passed forward and backward through the neural network only once

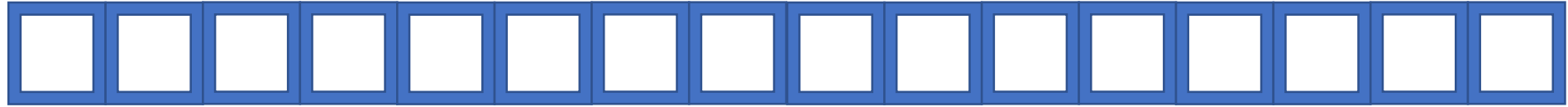
Batch size

Total number of training examples present in a single batch

Iteration

The Number of passes to complete one epoch

Batch size



Data Set



1 Epoch

Iteration

The Number of passes to complete one epoch

Total data : 2000

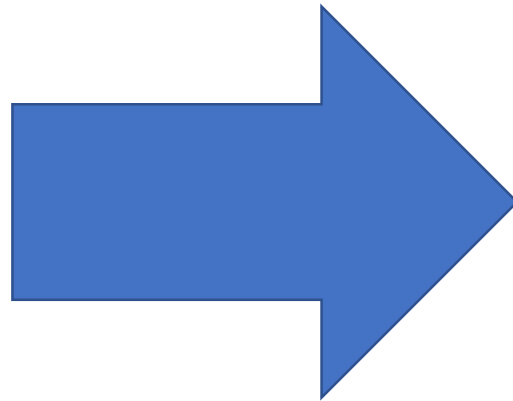
Epochs = 20

Batch size = 500

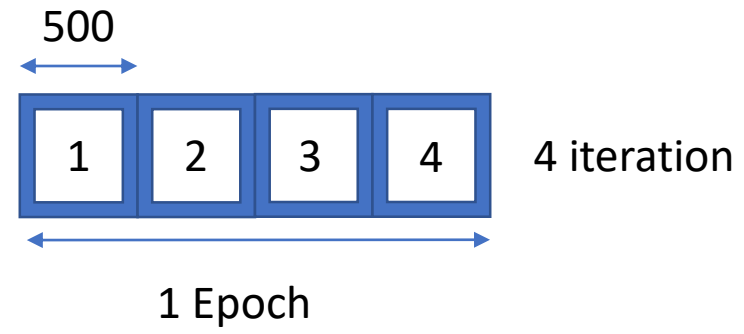
Total data : 2000

Epochs = 20

Batch size = 500

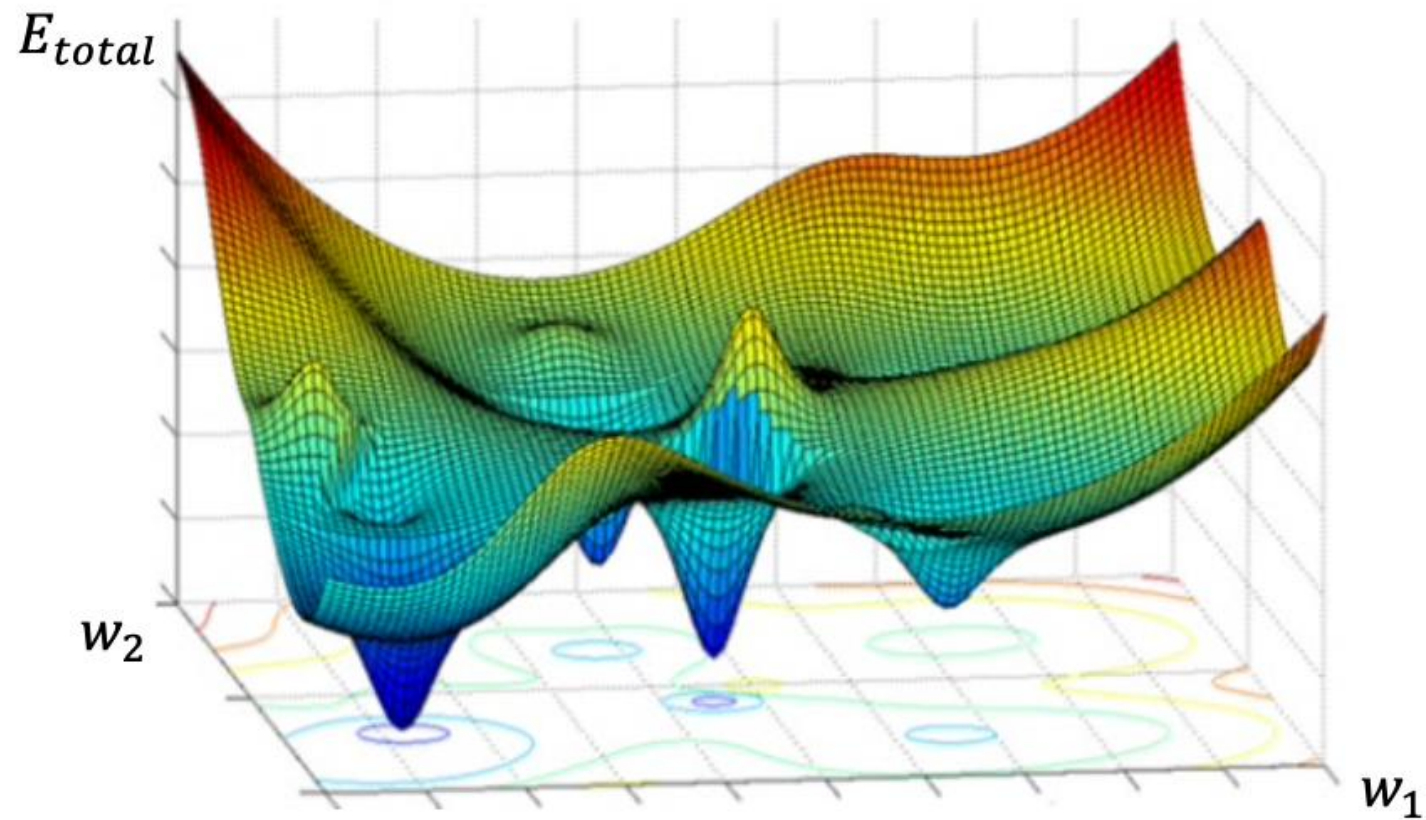


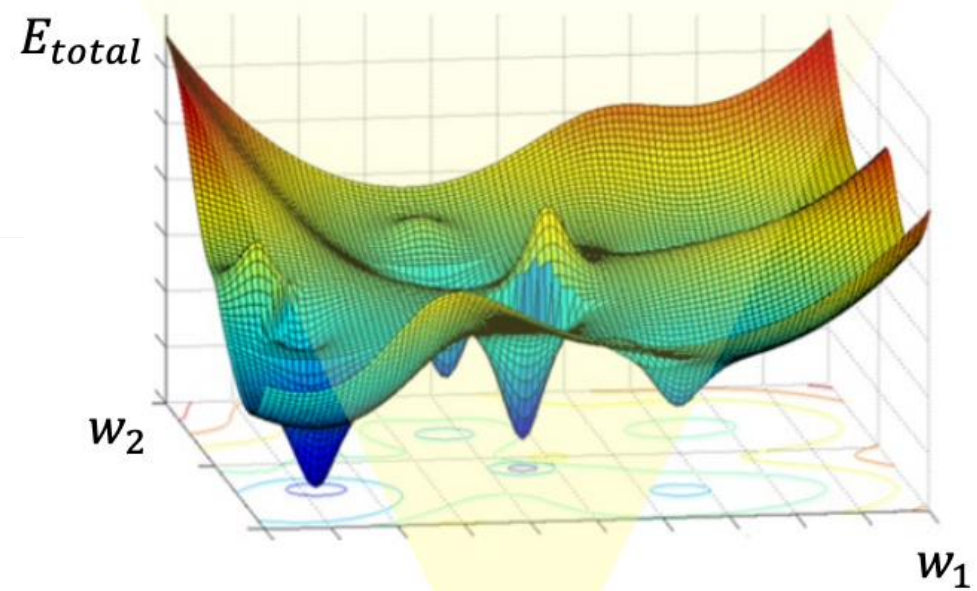
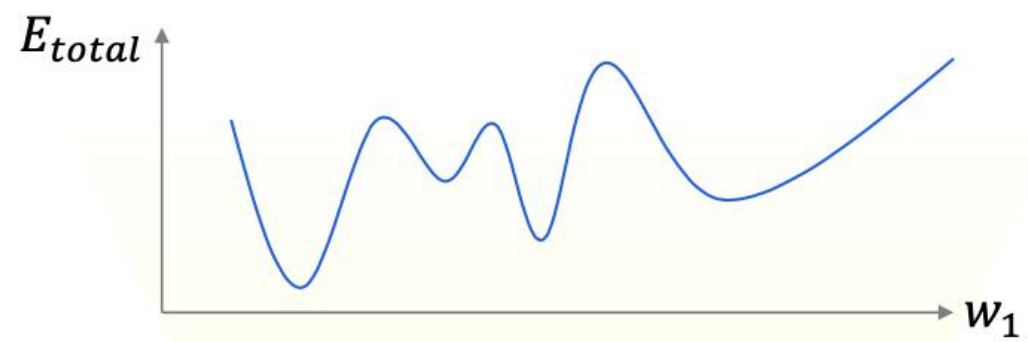
How is an epoch organized?

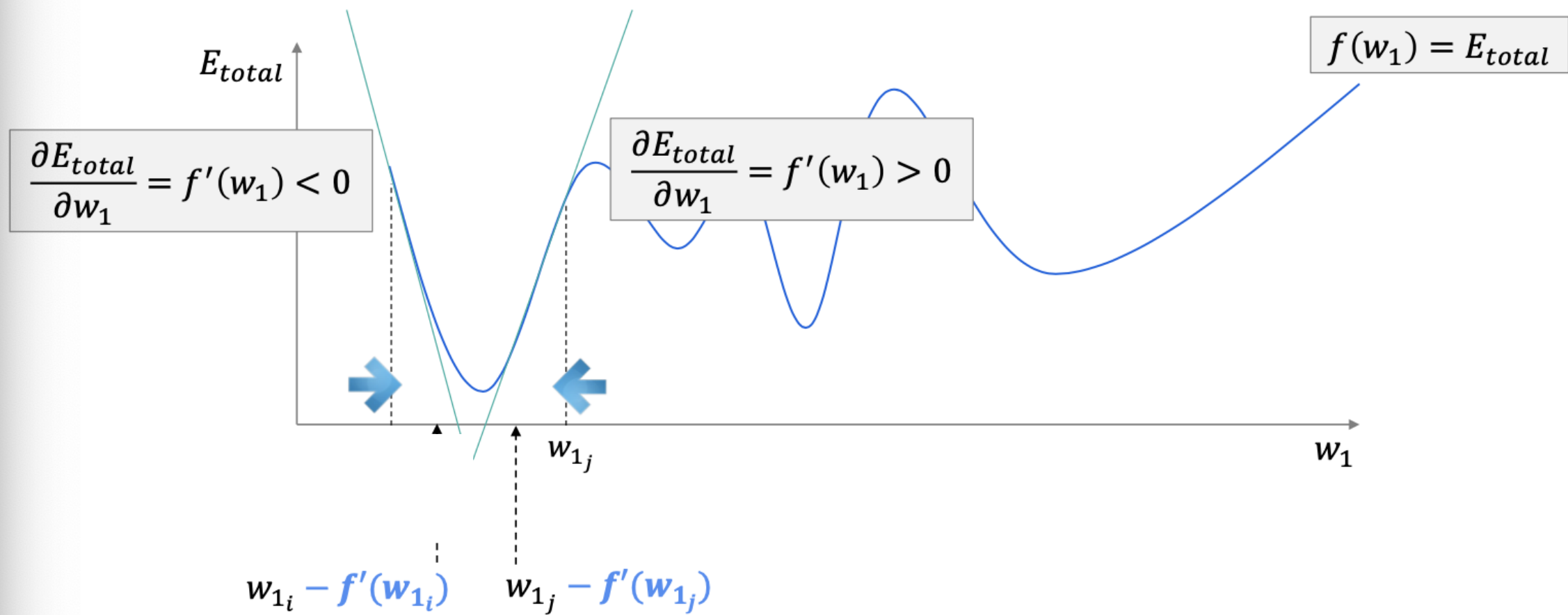


$$E_{total}(w_1, w_2, w_3, \dots, w_8, b_1, b_2, \dots, b_4)$$

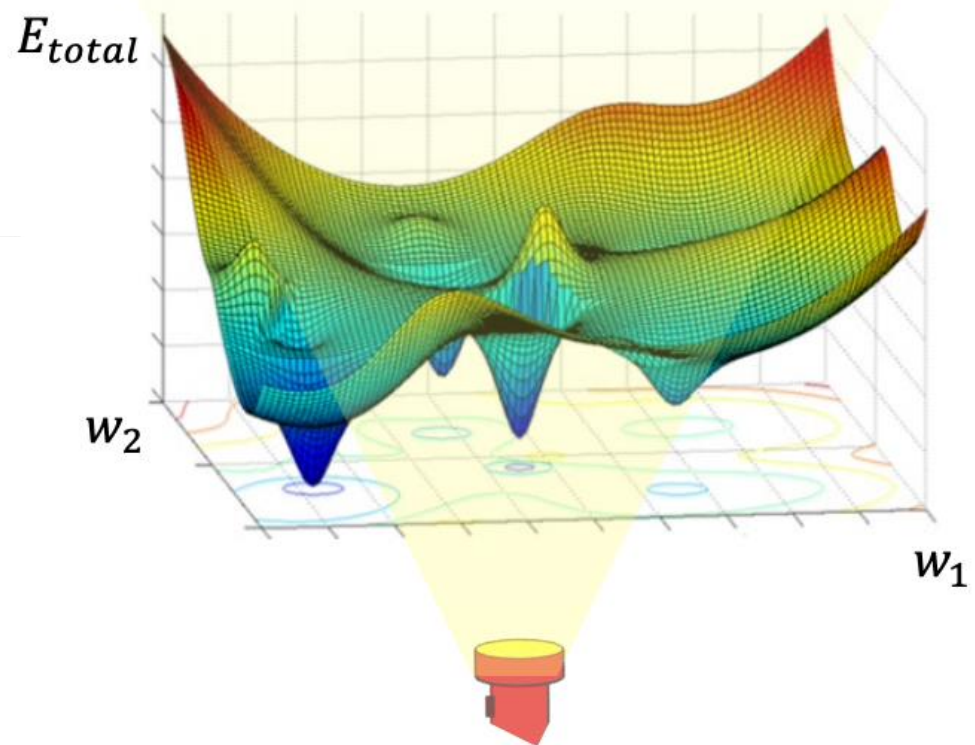
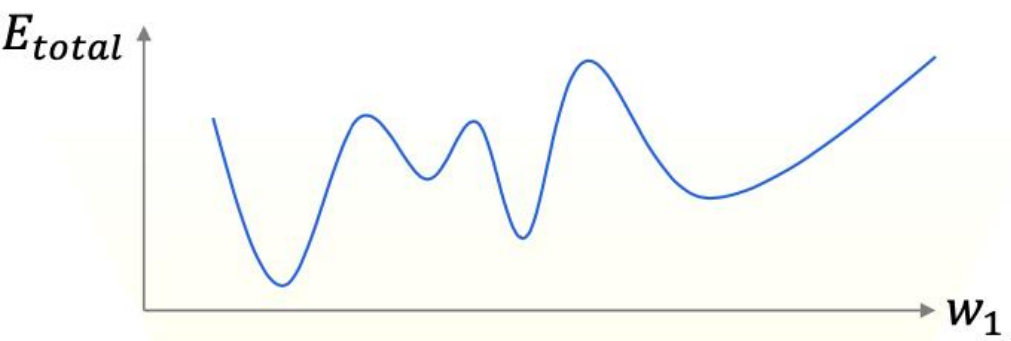
Non-convex optimization problem





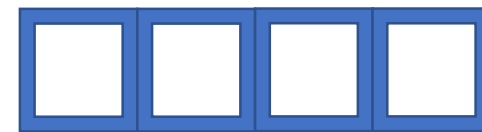


To be more smart,
 $w_1 \leftarrow w_1 - f'(w_1)$



Random!

1



1 Epoch

SGD Classifier
stochastic Gradient
Descent

속도 \propto 빠름

정확도 \propto 낮음

SGD Classifier
stochastic Gradient
Descent

