

We have studied different types of optimizers in the class :-

- ① Gradient Descent
- ② Stochastic Gradient Descent
- ③ Mini-batch Gradient Descent
- ④ Momentum-based Gradient Descent
- ⑤ Ada Grad
- ⑥ Adam

① Your task is to apply all these types of optimizers in the code of LAB-3.

② Analyze the variation in performance with the change in parameters in these optimizers.

Eg:- lr in SGD

$\epsilon$ , momentum in SGD

$[\text{var1}, \text{var2}]$  in Adam

- ③ Plot the graph showing these variations  
You can also use "wandb" for this analysis.

Reference :- torch.optim library in Pytorch.

<https://pytorch.org/docs/stable/optim.html>