



Optimization Algorithms





Module 3 Objectives

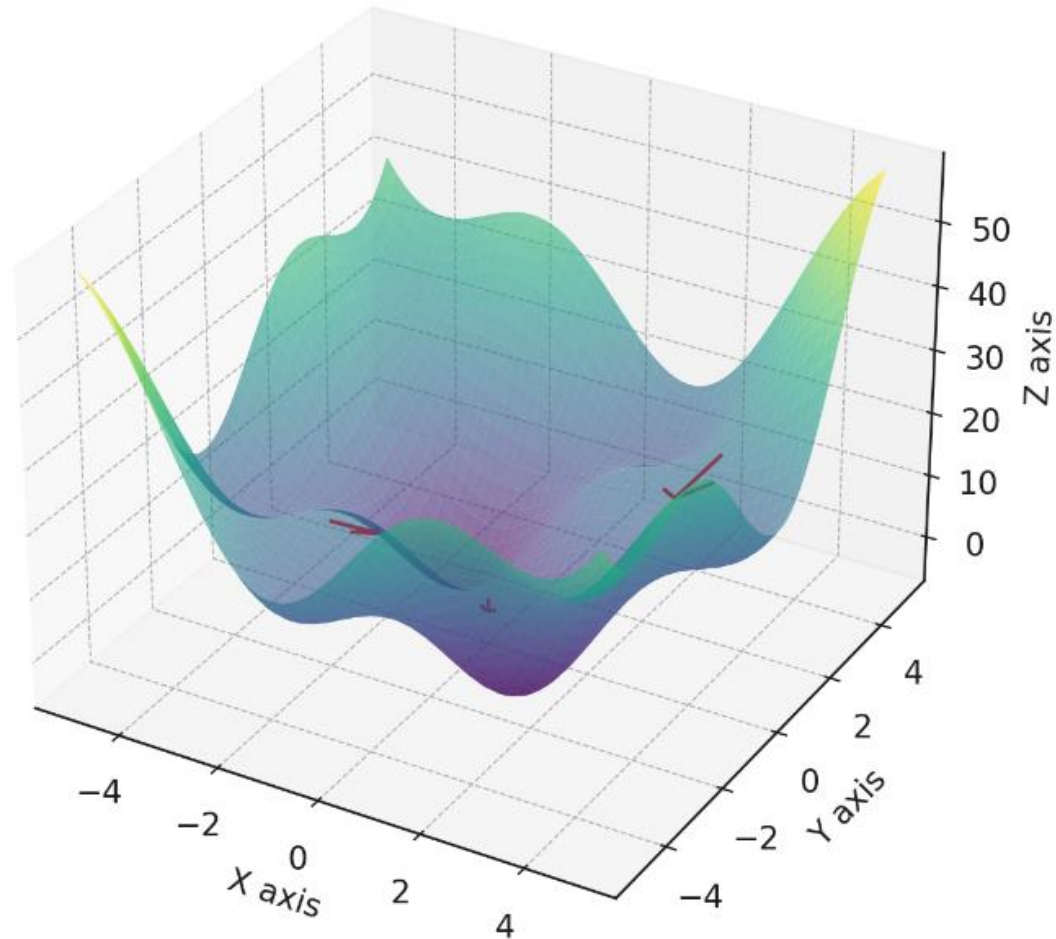
1. Describe the purpose and process of gradient descent.
2. Discuss the error loss function.
3. Describe optimizers.
4. Adjust a model's hyperparameters to guide its performance.



Understanding Gradient Descent

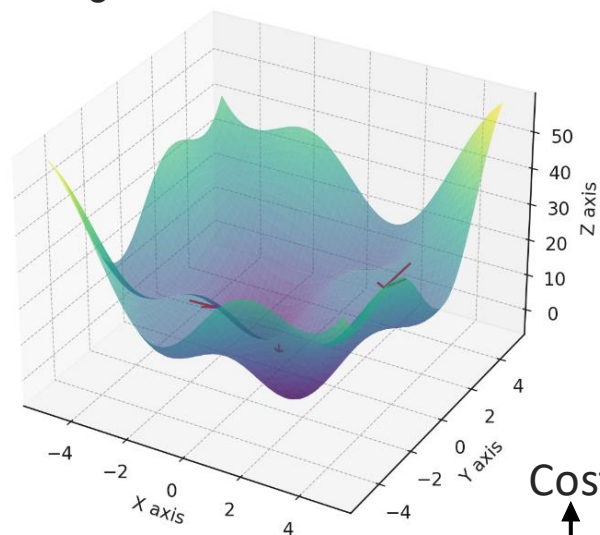
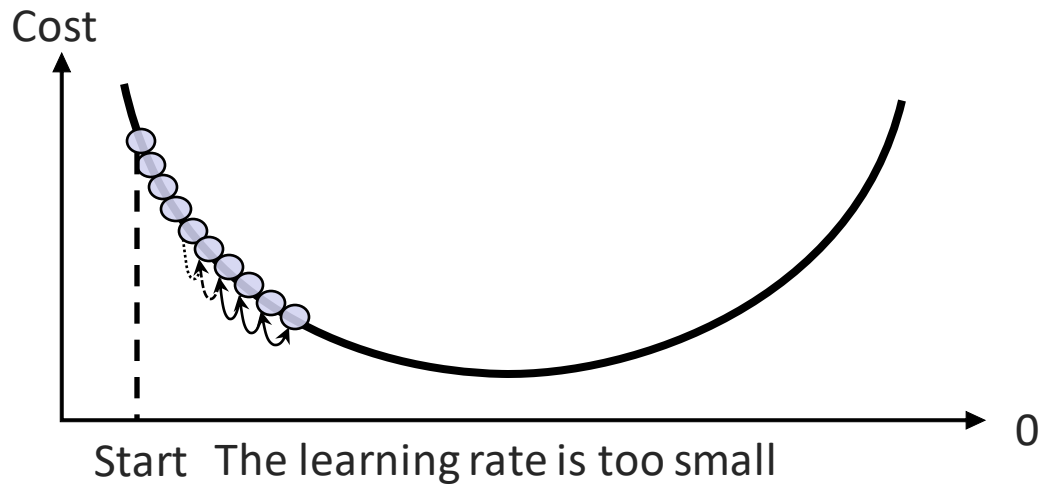


It's All Downhill From Here

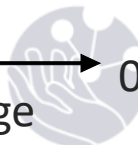
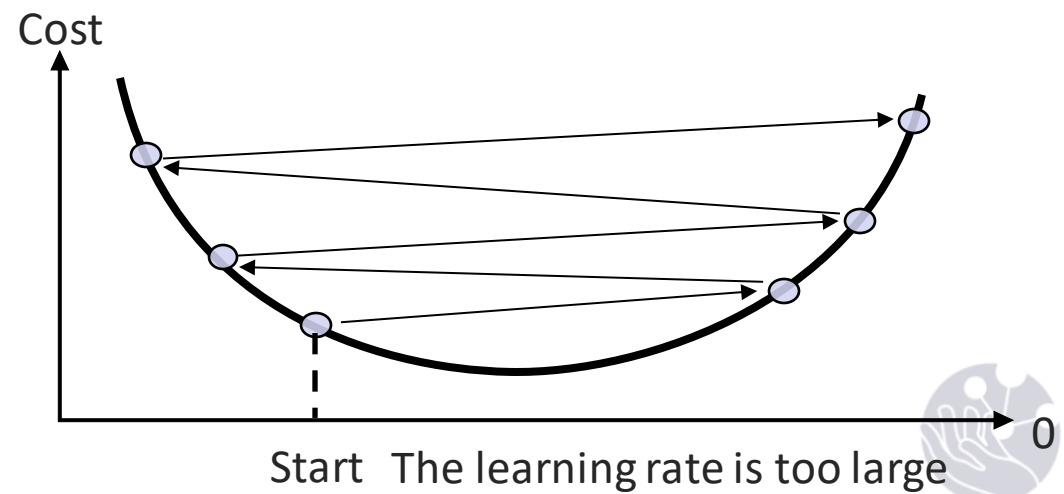


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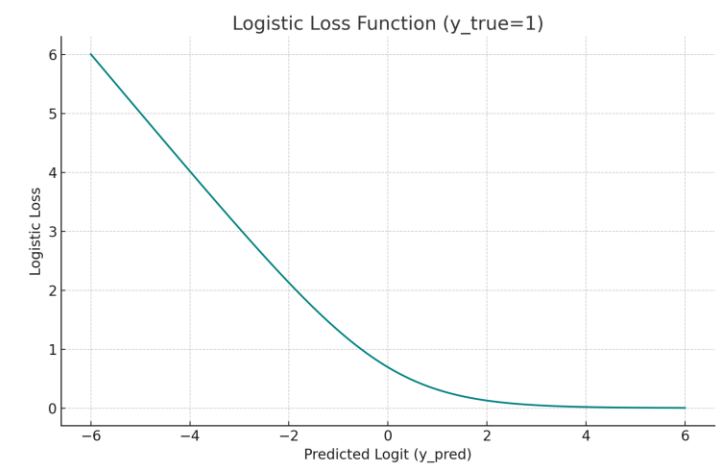
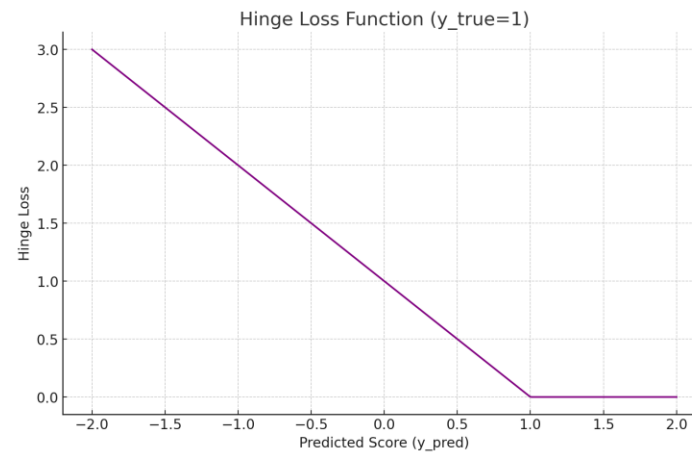
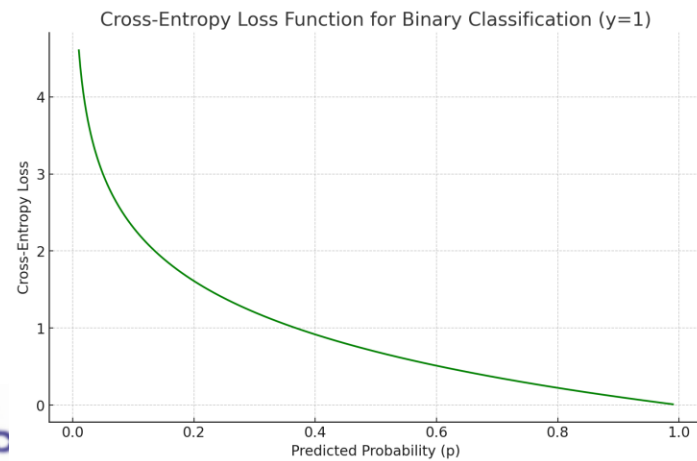
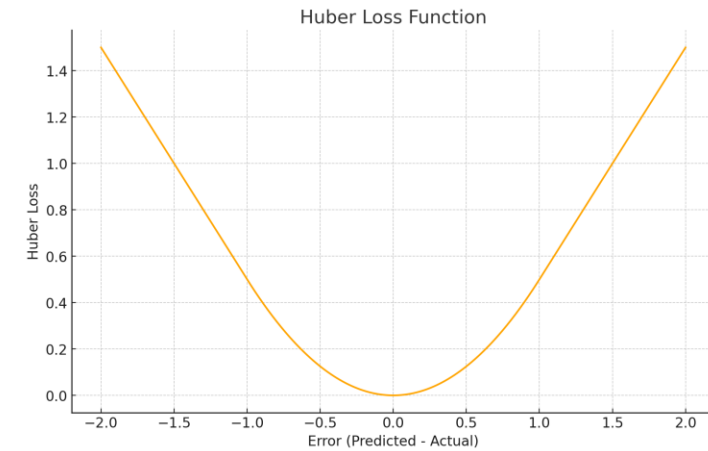
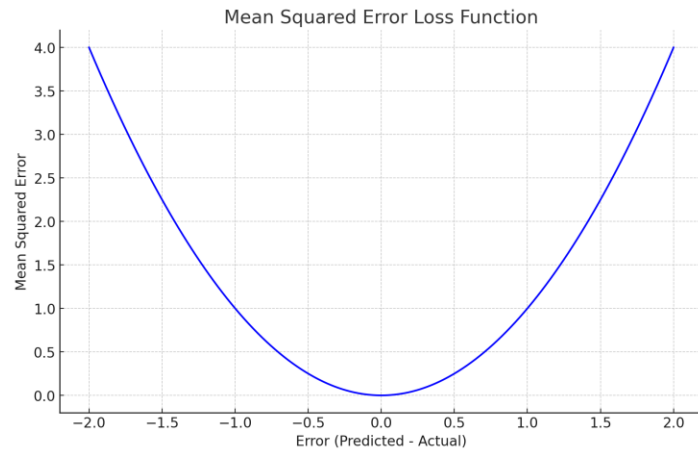


Introduction to Error and Loss Functions





Some Loss Functions

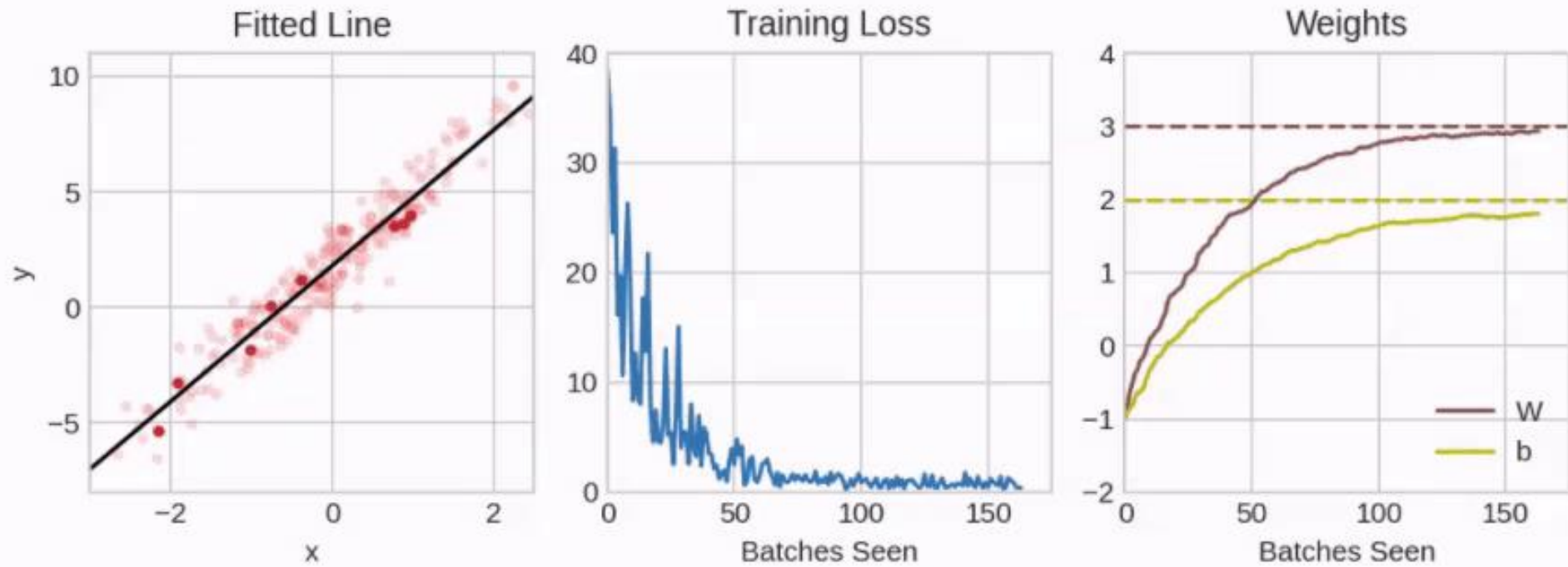


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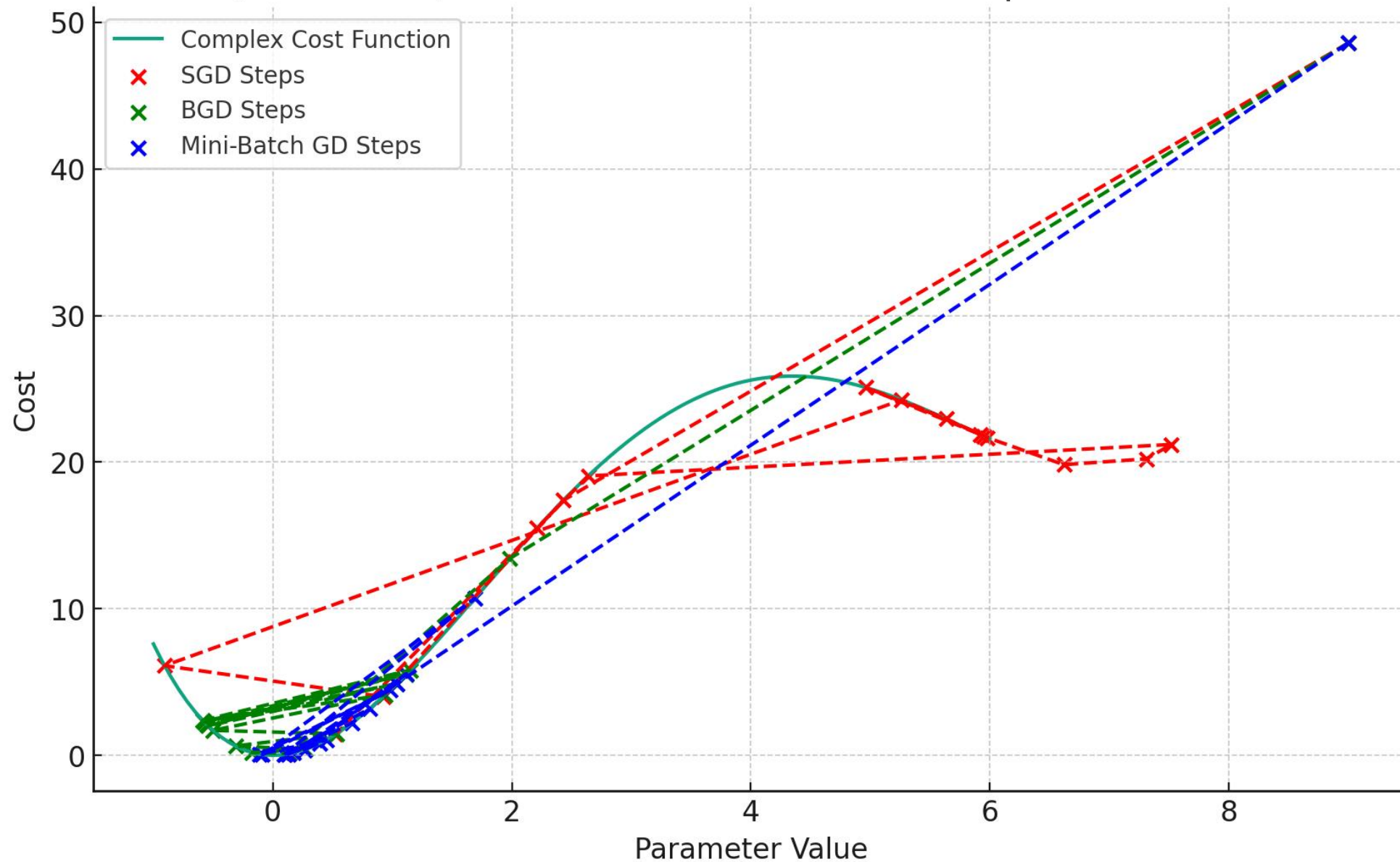


Optimizers and Advanced Gradient Descent Techniques

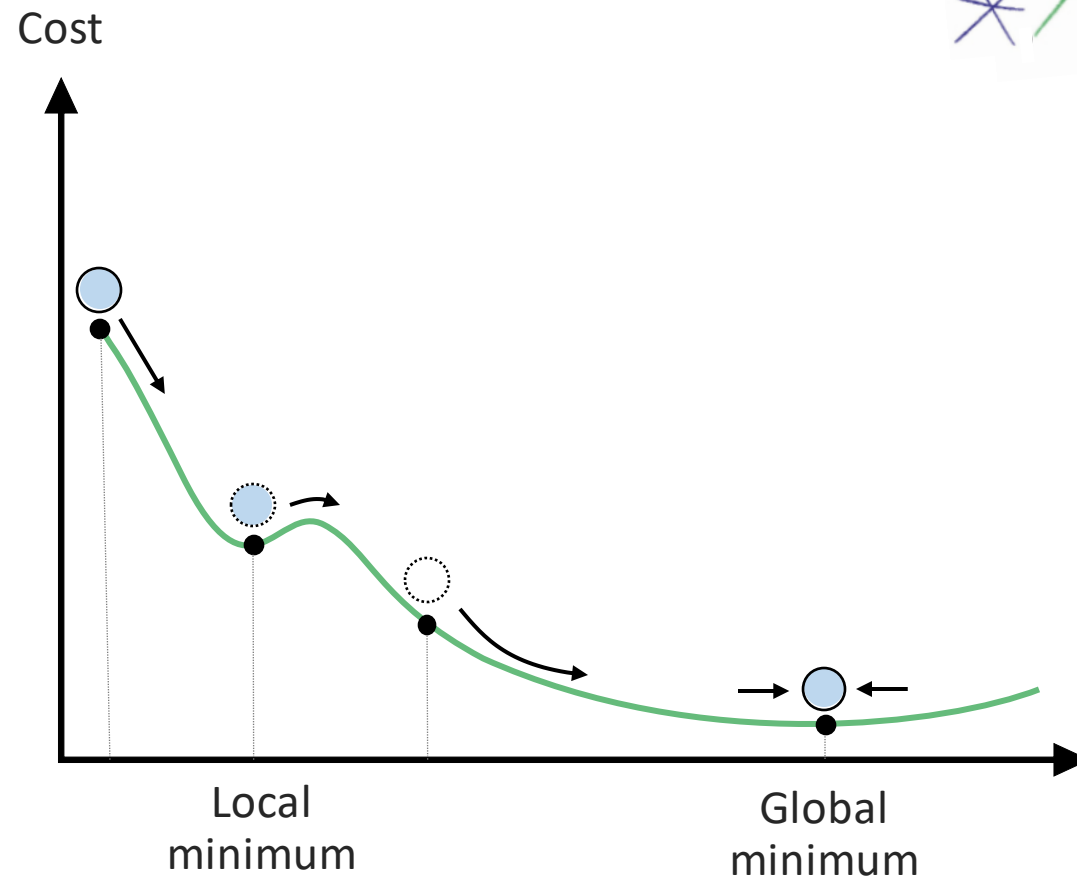
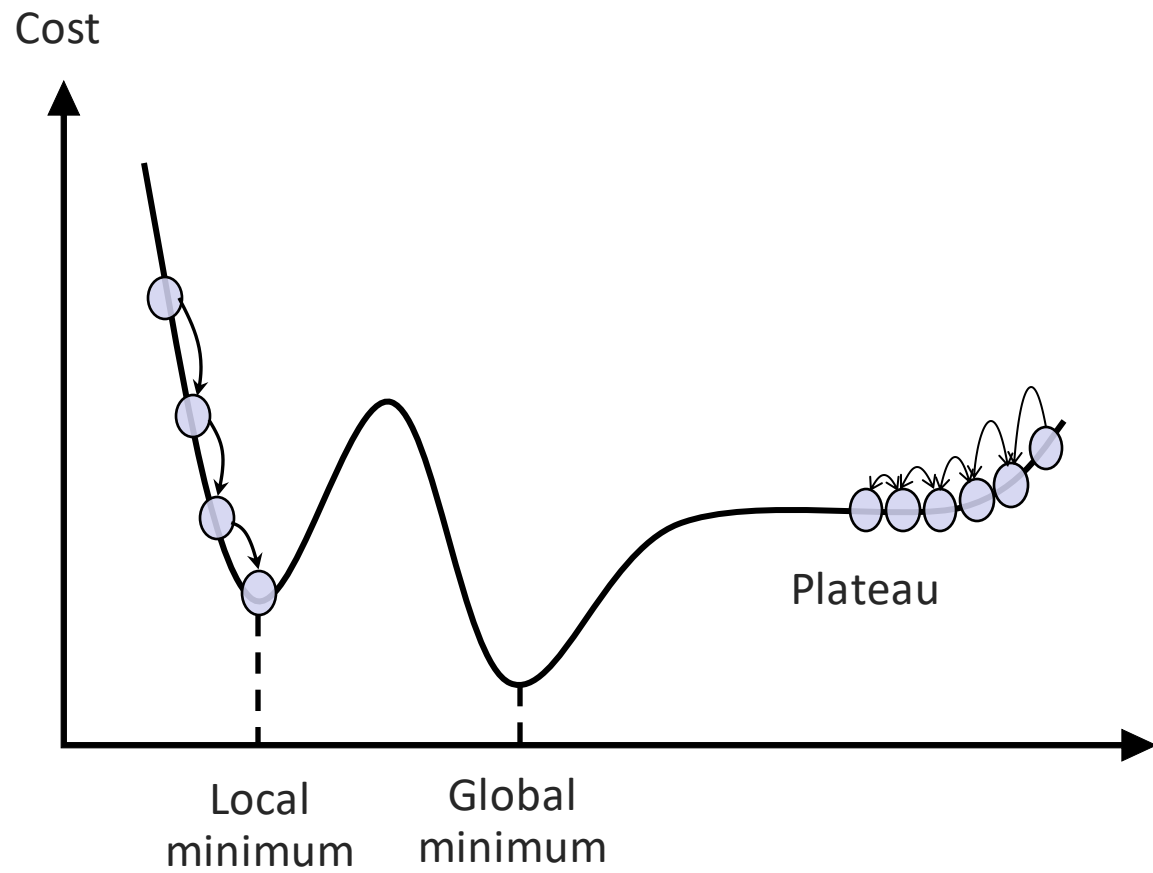


Training a neural network with Stochastic Gradient Descent.

SGD, Batch GD, and Mini-Batch GD on a Complex Cost Function



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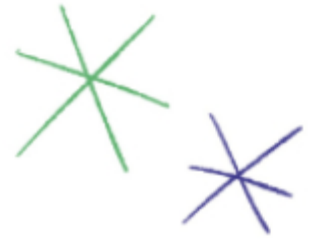
Choosing the Right Optimizer: A Quick Guide





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Hyperparameter Optimization

04_bees_vs_wasps.ipynb

This notebook will walk you through building and training your own image classification model, then allow you to compare different hyperparameter optimization configurations!



Questions?

(QR CODE FOR SURVEY!)

