Mindluster Platform

About the course Optimization in deep learning

Course Presenter : Learn With Jay

Optimization in deep learning, in this course we will learn about Optimization in Deep Learning course. Optimization is a core aspect of training neural networks efficiently and effectively. This course introduces key optimization algorithms used in deep learning, starting with the basics of gradient descent and expanding into advanced techniques such as SGD, Momentum, AdaGrad, RMSProp, and Adam. You will understand how each optimizer works, their mathematical foundations, when to use them, and how they impact learning dynamics. Weâ€™ll explore the role of learning rates, loss functions, convergence behavior, and techniques like learning rate scheduling and weight regularization. Through hands-on coding with TensorFlow and PyTorch, you will learn to implement and compare these optimizers on real-world datasets. The course also addresses common optimization challenges such as vanishing gradients and overfitting. By the end, youâ€™ll be able to choose and fine-tune optimizers to improve model accuracy and training speed in any deep learning project. Learn With Jay

Computer Science Category's Courses

Course Lesson(10)

Lesson 1 : **Overfitting and Underfitting in Machine Learning Understanding Bias and Variance**

Lesson 2 : **Regularization in Deep Learning How it solves Overfitting**

Lesson 3 :
L2 Regularization neural network in Python from Scratch Explanation with Implementation

Lesson 4 :
Dropout in Neural Network Detailed Explanation with implementation in Python from Scratch

Lesson 5 : **Mini Batch Gradient Descent Deep Learning with Stochastic Gradient Descent**

Lesson 6 :
Exponentially Weighted Moving Average or Exponential Weighted Average Deep Learning

Lesson 7 : **Momentum Optimizer in Deep Learning Explained in Detail**

Lesson 8 : **RMSprop Optimizer Explained in Detail Deep Learning**

Lesson 9 : **Adam Optimizer Explained in Detail Deep Learning**

Lesson 10 : **Optimization in Deep Learning All Major Optimizers Explained in Detail**

Related courses

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