Mindluster Platform

About the course Back propagation fundamentals

Back propagation course, in this course we will delve deep into the intricacies of back propagation, understanding its principles, and mastering its application. We will explore how back propagation enables neural networks to learn from data by iteratively adjusting weights to minimize error. Through a series of modules, you will learn the mathematical foundations of back propagation, including the chain rule and gradient descent optimization. We will cover advanced techniques for optimizing back propagation, such as momentum, learning rate schedules, and regularization. Additionally, you will gain practical experience implementing back propagation algorithms in Python, allowing you to train and fine-tune neural networks effectively. Whether you're new to neural networks or seeking to enhance your understanding of back propagation, this course will equip you with the knowledge and skills needed to tackle complex machine learning tasks with confidence.

Computer Science Category's Courses

Course Lesson(30)

Lesson 1 : **Five Steps to Create a New AI Model**

Lesson 2 : **How Large Language Models Work**

Lesson 3 : **Why Are There So Many Foundation Models**

Lesson 4 : **What are Convolutional Neural Networks CNNs**

Lesson 5 : **What are GANs Generative Adversarial Networks**

Lesson 6 : **What are Transformers Machine Learning Model**

Lesson 7 : **What is LSTM Long Short Term Memory**

Lesson 8 : **What is NLP Natural Language Processing**

Lesson 9 : **NLP vs NLU vs NLG**

Lesson 10 : **What is Random Forest**

Lesson 11 : **What are Autoencoders**

Lesson 12 : **What is a Knowledge Graph**

Lesson 13 : **What is Monte Carlo Simulation**

Lesson 14 : **Overfitting Underfitting and Bad Data Are Ruining Your Predictive Models**

Lesson 15 : **Gradient Descent Explained**

Lesson 16 : **What is an RBM Restricted Boltzmann Machine**

Lesson 17 : **Fluid vs Crystallized Intelligence**

Lesson 18 : **Edge AI vs Distributed AI**

Lesson 19 : **Use AI Powered Automation to Accelerate Auto Claims Processing**

Lesson 20 : **Supervised vs Unsupervised Learning**

Lesson 21 : **What is Time Series Analysis**

Lesson 22 : **What is MLOps**

Lesson 23 : **Large Language Models Are Zero Shot Reasoners**

Lesson 24 : **What is Back Propagation**

Lesson 25 : **Training AI Models with Federated Learning**

Lesson 26 : **What is PyTorch Machine Deep Learning**

Lesson 27 : **Scaling AI Model Training and Inferencing Efficiently with PyTorch**

Lesson 28 : **How to Add AI to Your Apps Faster with Embedded AI**

Lesson 29 : **Using Retrieval Augmented Generation with a Large Language Model AI Chatbot**

Lesson 30 : **Open Source in Action with watsonx**

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