Welcome to ineuron.ai

Deep Learning ANN

Description:

Deep Learning is a subfield of machine learning concerned with algorithms inspired by the structure and function of the brain called artificial neural networks. It is a function that imitates the workings of the human brain in processing data and creating patterns for use in decision making. Learn Deep Learning, Transfer Learning and Neural Networks using the latest frameworks. Become a Deep Learning Expert !!

Start Date:

Doubt Clear Time:

Course Time:

Features:

Source code

Roadmap

Quizzes

Assignments

Downloadable resources

Completion certificate

What we learn:

Neural Networks

Perceptron

Evolution of Neural Networks

Maths behind concepts of Neural Networks

Back propagation

Problems faced while training Neural Networks and its solution

Requirements:

Basic programming knowledge

A system with a decent internet connection

Your dedication

Instructor:

Name:

Sunny Bhaveen Chandra

Description:

Sr. Data Scientist and lecturer at iNeuron.ai with working experience in computer vision, natural language processing and embedded systems. Hands-on experience leveraging machine learning, deep learning, transfer learning models to solve challenging business problems. Also, he has a vast

interest in Robotics.

>Introduction:

>>Introduction to Deep Learning

>>Importance of Deep Learning

>>Why you should study Deep Learning? (Motivation)

>>ANN vs BNN

>>The first Artificial Neuron

>Perceptron:

>>Overview of Perceptron

>>More about Perceptron

>>Perceptron implementation using python - 1

>>Perceptron implementation using python - 2

>>Perceptron implementation using python - 3

>>Perceptron implementation using python - 4

>>Perceptron implementation using python - 5

>>Perceptron implementation using python - 6

>>Perceptron implementation using python - 7

>>Python scripting & modular coding for Perceptron

>>Python logging basics and docstrings

>>Python packaging, Github actions, and PyPI

>ANN -1:

>>Multilayer Perceptron

>>Forward propagation

>>Why we need Activation function?

>>ANN implementation using tf.keras - 1

>>ANN implementation using tf.keras - 2

>>ANN implementation using tf.keras - 3

>>ANN implementation using tf.keras - 4

>>ANN with Callbacks | Tensorboard | Early Stopping | Model Checkpointing

>ANN - 2:

>>Vector

>>Differentiation

>>Partial differentiation

>>Maxima and minima concept

>>Gradient descent basics

>>In-depth understanding of Gradient descent with mathematical proof

>ANN - 3:

>>Chain rule

>>Back propagation

>ANN - 4:

>>General problems in training Neural Networks

>>Vanishing and Exploding gradients

>>Activation function basics

>>Weight initialization

>>Activation functions - 1

>>Activation functions - 2

>>Activation functions - 3

>>Transfer learning

>>Batch normalization -1

>>Batch normalization -2

>>Batch normalization -3

>ANN - 5:

>>Introduction to fast optimizers

>>Momentum optimization

>>NAG

>>Elongated bowl problem | AdaGrad

>>RMSProp

>>Adam

>>Loss functions

>>Regularization

>>Dropout