



## Deep Learning for Kids

### **Description:**

Learners will master the fundamentals of deep learning as well as how to tackle a challenging real-world problem that is difficult to handle with standard programming in this course. This course will teach you the fundamentals of AI, allowing you to create incredible AI applications. Students will receive hands-on practical experience in designing AI-based projects after successfully completing the course. Learners might begin applying for freelancing employment in order to make a fortune.

### **Start Date:**

### **Doubt Clear Time:**

### **Course Time:**

### **Features:**

# Online Instructor-led learning

# Practical Implementation

- # Integrate academic knowledge with tech
- # Real-time project
- # Live class recording
- # Doubt clearing
- # Assignment in all the module
- # Quiz in every module
- # Career Counselling
- # Completion certificate

### **What we learn:**

- # Introduction Artificial Intelligence
- # Introduction to Deep Learning
- # Supervised learning
- # Unsupervised learning
- # Python basics
- # NumPy basics
- # Pandas basics
- # TensorFlow
- # Kera's
- # Artificial neural network
- # Convolution neural network
- # Projects

### **Requirements:**

- # System with Internet Connection
- # Interest to learn

# Dedication

**Instructor:**

**>Course Introduction:**

>>Welcome to machine learning course

>>What you will learn from this course

>>Course pre-requisites

>>What is deep learning?

>>Who is this course for?

>>What you will get from this course?

>>How to get access to course materials?

>>What career path you can follow after completion of this course?

**>Introduction to AI:**

>>What is Artificial intelligence?

>>History of AI

>>Applications of AI

>>Advantage of AI

>>Practical use of AI

**>Introduction to learning:**

>>What do you mean by learning?

>>Why deep learning?

>>How babies learn: An Analogy

>>Different types of learning

>>What is Supervised learning?

>>Supervised learning example: Importance of Teacher feedback

>>What is Unsupervised learning?

>>Unsupervised learning example: Categorizing students based on hobbies (Annual Fu

>>What is Reinforcement learning?

>>How a self-driving car works: An Analogy

>>Discussion: Sofia robot

>>Uses of Deep learning

### **>Assignment1:**

>>Give 3 examples of AI used in the education sector.

### **>Preparing your system:**

>>Why python?

>>Colab overview

### **>Working with important libraries:**

>>Python basics

>>Numpy basics

>>Pandas basics

>>Tensorflow basics

>>Keras basics

## **>Assignment2:**

>>Create a function to add 2 numbers

>>Create a function that will take name and address from user and print the output

>>Print multiplication table of 1 to 10 using for loop

>>Print multiplication table of 1 to 10 using for loop

>>Using TensorFlow add two numbers and print the output

>>Using TensorFlow add two multiply to matrices and print the output

## **>Neural network basics:**

>>What is neuron?

>>Neural network vs Human brain network

>>What is perceptron?

>>What is ANN?

>>Practical: Perceptron

>>Tensorboard overview

>>Logging the activity of training using Tensorboard

>>Analysis: How to classify orange and apple with features

>>Practical: Predicting the price of premium phones for the year 2023 using Neural network

>>Explain Logistic Regression

>>Practical: Classifying male and female based on height and weight of a person

>>What do you mean by Activation function?

## **>Assignment3:**

>>Create a neural network and predict the price of mobile network recharge for next 1 y

## >**Convolution neural networks:**

>>Introduction

>>What are images?

>>Image data vs numerical data

>>Practical: Deep neural network

>>Using Netron to visualize neural network

>>What is CNN?

>>Why use CNN instead of N-layer neural network?

>>Visualizing different layers of CNN using web app: <https://blog.terencebroad.com/arch>

>>Practical: Basic CNN using keras

>>Practical: Create a CNN and identify day, evening and night

>>Discussion: Use cases of CNN (Detection, tracking)

## >**Assignment4:**

>>Create a CNN to classify whether the room is empty or not

## >**Projects:**

>>Classifying apple vs orange

>>Fruit classification using CNN

## >**Summary:**

>>Course Outro

>>Future Scope of Deep learning