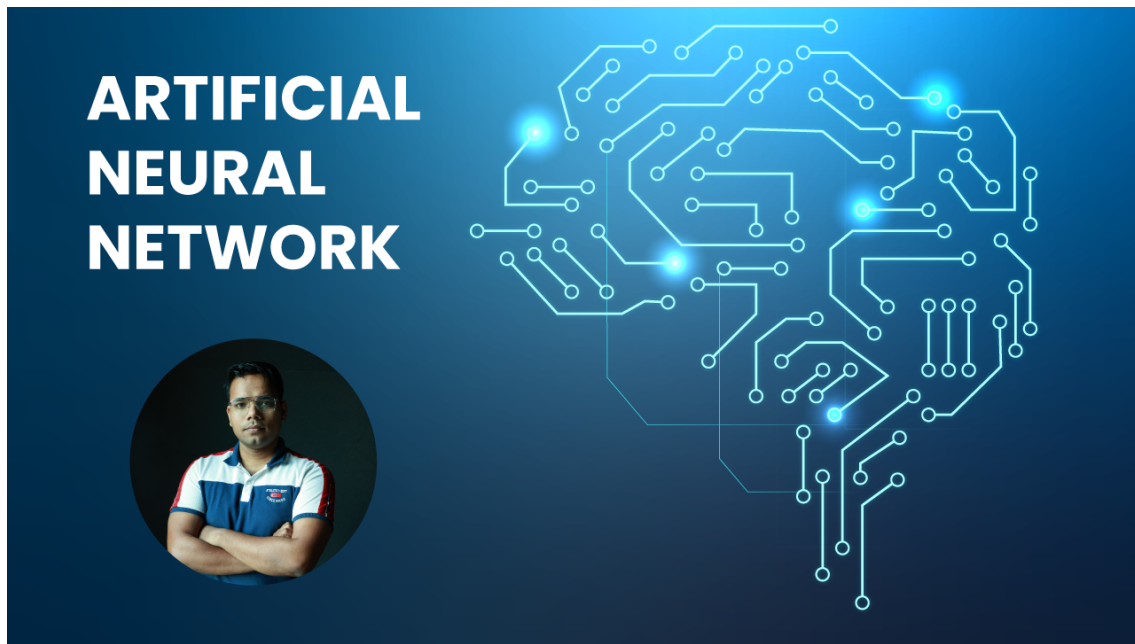


Welcome to ineuron.ai



## Artificial Neural Network

### **Description:**

Artificial neural networks (ANNs) are computer systems that are modelled after the biological neural networks that make up animal brains. It processes data and creates patterns for use in decision-making in the same way that the human brain does. Using the most up-to-date frameworks, you'll learn Artificial neural networks, Transfer Learning, and more.

### **Start Date:**

### **Doubt Clear Time:**

### **Course Time:**

### **Features:**

# Source code

# Roadmap

# Quizzes

# Assignments

# Downloadable resources

# Completion certificate

### **What we learn:**

# Neural Network

# Perceptron

# Evaluation of Neural Network

# Maths behind concepts of Neural Networks

# Back Propagation

# Problems faced while training Neural Network and its solution

# Building solutions

### **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:**

**>AI | Deep Learning | Evolution  
of ANNs:**

>>Introduction

>>Introduction

**>Perceptron:**

**>Perceptron Implementation:**

**>Perceptron Implementation |  
Python scripting and packaging  
| Modular coding:**

**>Python logging basics in  
previous codes, docstrings:**

**>Python packaging | Github  
Actions | PyPI:**

**>Neural Network:**

**>ANN Derivation:**

**>ANN implementation using  
tf.keras:**

**>ANN implementation using  
python scripting:**

**>ANN implementation using  
python scripting continued:**

**>Callbacks in Tensorflow:**

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

**>Mathematics in DL:**

**>THEORY: Vectors:**

**>THEORY Differentiation |  
Partial Diff | Gradients | Ascent  
and Descent:**

**>THEORY Problems in training  
NN | Vanishing and Exploding  
gradients:**

**>Tensorflow Framework:**

**>TF 2.x low-level API:**

**>TF 2.x low-level API PART 2:**

**>Activation Function:**

**>Activation Function - Started:**

**>Activation                      Function  
-continued:**

**>Activation function final:**

**>Weight initialization, Transfer  
learning, Batch Normalization:**

**>Weight      initialization      and**

**Transfer learning:**

**>Batch Normalization: Theory and Practical:**

**>MLFlow:**

**>Optimizers, Regularization and Loss function:**

**>Fast Optimizers | Momentum Optimization:**

**>NAG:**

**>AdaGrad:**

**>RMS Prop | Adam:**

**>Regularization | Dropout | Loss function:**