CYBORG
VIY PVT. LTD.

# DEEP LEARNING


| TEACHER: CERTIFIED TRAINER | DURATION: 16 CLASSES(x5 LEVELS) (1 HOUR PER CLASS) | MODE: ONLINE AND OFFLINE |
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Deep learning is a subset of machine learning that uses neural networks with many layers to model and understand complex patterns in large datasets. Inspired by the structure and function of the human brain, these models are built with artificial neurons arranged in layers that can automatically learn features from raw data through a process called backpropagation.

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ROBOTICS ACADEMY PVT. LTD.

# COURSE CURRICULUM

**Level 1: Introduction to Deep Learning and Computer Vision Basics**

- Introduction to Deep Learning
- Introduction to Computer Vision
- Image Classification with Neural Networks
- Project - Handwritten Digit Recognition

**Level 2: Convolutional Neural Networks (CNNs)**

- Understanding CNNs
- Advanced CNNs and Transfer Learning
- Object Detection and Localization
- Project - Object Detection

**Level 3: Recurrent Neural Networks (RNNs) and Natural Language Processing (NLP)**

- Introduction to RNNs
- NLP Basics and Text Preprocessing
- Sentiment Analysis and Text Generation
- Project - Sentiment Analysis and Text Generation

**Level 4: Advanced Deep Learning Techniques**

- Generative Adversarial Networks (GANs)
- Sequence-to-Sequence Models
- Attention Mechanisms and Transformers
- Project - Advanced Deep Learning Application

**Level 5: Real-time Recognition and Applications**

- Real-time Object Tracking
- Face Recognition and Emotion Detection
- Optical Character Recognition (OCR)
- Project - Real-time Recognition System