Deep Learning with Tensor flow & Keras

Description

ARDENT's Deep Learning Course will give you all the knowledge needed to work on Deep Learning libraries like Keras and Tensorflow. In this training we will learn about what is AI, ML, explore neural networks, understand deep learning frameworks, and implement various machine learning algorithms using Deep Networks. We will also explore how different layers in neural networks do data abstraction and feature extraction using Deep Learning.

Expectations and Goals

- Deep Learning and TensorFlow Concepts
- Using Python with TensorFlow Libraries
- Working with Convolutional Neural Network (CNN)
- Recurrent Neural Network (RNN)
- Working with Keras
- Implementing Restricted Boltz-mann Machine (RBM)

Prerequisites

Anybody interested in Deep Learning can take this Training. Though knowledge of following will be a plus point:

- Python programming
- Machine Learning
- Neural Networks

Course Schedule

Module	Topic	Hours
Module 1	• Why Deep Learning? • What is a neural network? • Reasons to go Deep • Choice of Deep Net	2 hrs
Module 2	• Introduction to Artificial Neural Networks • Feedforward Neural networks • Backpropagation • Activation functions • MLP	4 hrs
Module 3	• Introduction to python • Python data types • Functions • Classes • Modules	4 hrs
Module 4	• Introduction to Numpy • Creating N-Dimensional numpy arrays	2 hrs

	• Array mathematics • Slicing N-Dimensional array • Introduction to pandas • Working with pandasSeries • Working with pandas Dataframe	
Module 5	• Restricted Boltzmann Machines • Deep Belief Nets • Convolutional Networks • Recurrent Nets	3 hrs
Module 6	• Autoencoders • Recursive Neural Tensor Nets	5 hrs
Module 7	• Introduction to TensorFlow • HelloWorld with TensorFlow • Basic computation with TensorFlow	10 hrs
Module 8	• Introduction to Keras • Keras vs TensorFlow • Building Basic models with Keras	5 hrs
Module 9	• CNN History • Understanding CNNs • CNN Application using Keras	5 hrs
Module 10	• Intro to RNN Model • Long Short-Term memory (LSTM) • Recursive Neural Tensor Network Theory • Applications of Unsupervised Learning • Restricted Boltzmann Machine	10 hrs
Module 11	• Project	20 hrs