

# OTHER COURSES OFFERED



Computer Basics



Professional Diploma in Multimedia



Advance Excel



Advance Diploma in Computer Technology



English Spoken Course



Doeacc 'O' Level/'A' Level



Graphic Designing



Digital Marketing



Web Designing



Language Courses  
C, C++, Java, PHP, Python,  
J Query, Java Script,  
Android Programing

## Get in Touch

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## About us:

More than  
20+ Yrs.  
Experience

Trained More Than  
1Lakh  
Students

Largest  
Infrastructure  
in Delhi/NCR

Focus on  
Job  
Placement

**Heights**<sup>TM</sup>  
...a family institute



Data  
Science  
FOCUSES ON ALGORITHMS

## Become Data Scientist



# MACHINE LEARNING

## 1. Course Overview

- Overview of Data Science
- What is Data Science
- Different Sectors Using Data Science

## 2. Data Analytics Overview

- Exploratory Data Analysis(EDA)
- EDA-Quantitative Technique
- EDA - Graphical Technique
- Data Analytics Conclusion or Predictions
- Data Types for Plotting
- Data Types and Plotting

## 3. Mathematical Computing with Python (NumPy)

- Introduction to Numpy
- Activity-Sequence
- Creating and Printing an ndarray
- Class and Attributes of ndarray
- Basic Operations
- Activity – Slicing
- Copy and Views
- Mathematical Functions of Numpy
- Advance Slicing
- Transpose and arance
- Searching

## 4. Scientific Computing with Python (SciPy)

- Introduction of SciPy
- SciPy Sub Package - Integration and Optimization
- SciPy sub package
- Demo - Calculate Eigenvalues and Eigenvector
- Demo - Calculate Eigenvalues and Eigenvector

## 5. Data Manipulation with Pandas

- Introduction of Pandas
- Data Types in Pandas
- Understanding Series
- Understanding DataFrame
- View and Select Data Demo
- Missing Values
- Data Operations
- File Read and Write Support
- Pandas SQL Operation

## 6. Python for Data Visualization- Matplotlib

- Introduction to Matplotlib
- Matplotlib Part 1 Set up
- Matplotlib Part 2 Plot
- Matplotlib Part 3 Next steps
- Matplotlib Exercises Overview
- Matplotlib Exercises – Solutions

## 7. Machine Learning with Python

- Linear Regression
- Linear Regression Theory
- Logistic Regression
- Logistic Regression Theory – Introduction
- Logistic Regression with Python
- K Nearest Neighbours
- KNN with Python
- KNN Project Overview and Project Solutions
- Decision Trees and Random Forests
- Support Vector Machines
- SVM Theory
- Support Vector Machines with Python
- K Means Clustering
- K Means with Python
- Principal Component Analysis
- PCA with Python
- Natural Language Processing

# DEEP LEARNING

## 1. Introduction

- What is neural network..?
- How neural networks works?
- Gradient descent
- Stochastic Gradient descent
- Perceptron
- Multilayer Perceptron
- BackPropagation

## 2. Keras Installation & API

- Installing Keras
- Getting started with Keras architecture
- An overview of predefined activation functions
- Some useful operations
- Saving and loading the weights and the architecture of a model

## 3. Activation Functions

- Activation functions
- What are activation functions?
- Sigmoid function
- hyperbolic Tangent function
- ReLu -Rectified Linear units
- Softmax function

## 4. Tensorflow Basics

- What is Tensorflow ?
- Intallation of Tensorflow
- Placeholders in Tensorflow defining placeholders feeding placeholders with data
- Variables, Constant
- Computation graph
- visualize graph with Tensor Board
- MLP digit Classifier using Tensorflow

## 5. Power BI & Tableau

## 6. My SQL DataBase

## 7. Feed-Forward Neural Networks with TensorFlow

- Feed-forward neural networks (FFNNs)
- Implementing Feed-forward neural networks (FFNNs)
- Implementing a multilayer perceptron (MLP)
- Tunning FFNNs hyperparameters

## 8. Tuning of Hyperparameters

- Regularization & Overfitting
- Regularizing a neural network with dropout
- Network Weight Initialization
- Vanishing gradients

## 9. Clasifying Images with Convolutional Neural Networks

- Introduction to CNN
- Train a simple convolutional neural net
- Pooling layer in CNN
- Design a convolutional layer application
- Understanding and visualizing a CNN

## 10. Introduction Recurrent Neural Networks (RNN)

- What are Recurrent Neural Networks (RNNs)?
- Understanding a Recurrent Neuron in Detail
- Long Short-Term Memory(LSTM)
- Implementation of RNN in Keras
- Vanishing and Exploding Gradient Problem

**Performing sentiment analysis of IMDb movie reviews**  
**Classifying Cats vs Dogs with a Convolutional Neural Network (CNN)**