

USPs

STUDY MATERIAL

LABS

LIVE PROJECTS

COURSE CERTIFICATE

CONFIRMATION LETTER, TRAINING LETTER, PROJECT LETTER

For Degree Pursing Candidates To Submit in Colleges

UPGRADED COURSE CONTENTS (UCC)

Regular updated course content according to Industry

CONSULTANTS/FACULTIES

Best part of the industry who is taking corporate batches eg. SDG, HCL, WIPRO, GENPACT, ACCENTURE & Manym...

INDUSTRY COLLABORATION & AWARENESS

From Bangalore, Hyderabad & Pune

100% JOB ASSISTANCE

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Resourcing Through Consultancy Services
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Exclusive Walk Ins For DUCATIens
Campus Interviews
Resume Sending
References



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Email: info@ducatindia.com

Web: www.ducatinidia.com

AUTHORISED PARTNERS

 Oracle Workforce Development Program	 redhat CERTIFIED TRAINING PARTNER
Java	Android

NOIDA

A-43 & A-52, Sector-16, Noida-201301
Ph.: 0120-4646464, +91-9871055180

GHAZIABAD

Plot No.1, Anand Industrial Estate, Near ITS College,
Mohan Nagar, Ghaziabad,
Ph.: 0120-4835400, +91-9810831363

FARIDABAD

SCO-32, First Floor Sector-16, Faridabad
Ph.: 0129-4150605/09, +91-9811612707

GURGAON

1808/2, 2nd Floor Old DLF, Sector 14, Gurgaon
Ph.: 0124-4219095-96-97-98, +91-9873477222

GREATER. NOIDA

F-205 Neelkanth Plaza Alpha 1 Commercial Belt
Opposite to Alpha Metro Station Greater Noida (U.P.)
Ph.: 0120-4345190....97, +91-9899909738

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PYTHON + DATA SCIENCE + MACHINE LEARNING

PYTHON

MODULE 1: PYTHON ESSENTIALS

INTRODUCTION

What is Python..?
A Brief history of Python
Why Should I learn Python..?
Installing Python
How to execute Python program
Write your first program

VARIABLES & DATA TYPES

Variables
Numbers
String
Lists ,Tuples & Dictionary

CONDITIONAL STATEMENTS & LOOPS

if...statement
if...else statement
elif...statement
The while...Loop
The for....Loop

CONTROL STATEMENTS

continue statement
break statement
pass statement

FUNCTIONS

Define function
Calling a function
Function arguments
Built-in functions

MODULES & PACKAGES

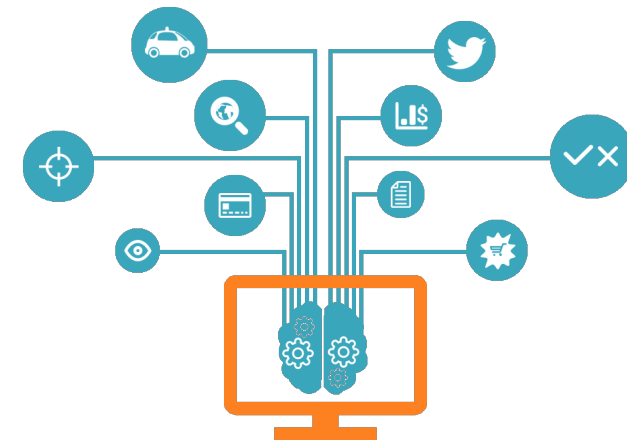
Modules
How to import a module...?
Packages
How to create packages

CLASSES & OBJECTS

Introduction about classes & objects
Creating a class & object
Inheritance
Methods Overriding
Data hiding

FILES & EXCEPTION HANDLING

Writing data to a file
Reading data from a file
Read and Write data from csv file
try...except
try...except...else
finally
os module





DATA SCIENCE

DATA SCIENCE

MODULE 1 : GETTING STARTED WITH PYTHON LIBRARIES

what is data analysis ?
why python for data analysis ?
Essential Python Libraries
Installation and setup
Ipython
Jupyter Notebook

MODULE 2 : NUMPY ARRAYS

Creating multidimensional array
NumPy-Data types
Array attributes
Indexing and Slicing
Creating array views and copies
Manipulating array shapes
I/O with NumPy

MODULE 3 : WORKING WITH PANDAS

Installing pandas
Pandas dataframes
Pandas Series
Data aggregation with Pandas DataFrames
Concatenating and appending DataFrames
Joining DataFrames
Handling missing data

MODULE 4 : DATA LOADING,STORAGE AND FILE FORMAT

Writing CSV files with numpy and pandas
HDF5 format
Reading and Writing to Excel with pandas
JSON data
Parsing HTML with Beautiful Soup
PyTables

MODULE 5 : STATISTICS AND LINEAR ALGEBRA

Basic statistics with numpy
Linear Algebra with numpy
Numpy random numbers
Creating a numpy masked array

MODULE 6 : DATA VISUALIZATION

Installation matplotlib
Basic matplotlib plots
Scatter plots
Saving plots to file
plotting functions in pandas

MODULE 7 : INTRODUCTION TO MACHINE LEARNING

What is ML..?
Types of ML
Decision trees
Linear regression
Logistic regression
Naive Bayes
k-Nearest Neighbors

MODULE 8 : NATURAL LANGUAGE PROCESSING

Install nltk
Tokenize words
Tokenizing sentences
Stop words with NLTK
Stemming words with NLTK
Speech tagging
Sentiment analysis with NLTK

MODULE 9 : INTRODUCTION TO OPENCV

Setting up opencv
Loading and displaying images
Applying image filters
Tracking faces
Face recognition

MODULE 10: WORKING WITH BIG DATA

What is Hadoop?
MapReduce
File handling with Hadoop
Pig
Pyspark



MACHINE LEARNING

MACHINE LEARNING

INTRODUCTION TO MACHINE LEARNING

What is Machine learning?
Overview about sci-kit learn and tensorflow
Types of ML
Some complementing fields of ML
ML algorithms
Machine learning examples

MODULE 2: REGRESSION BASED LEARNING

Simple regression
Multiple regression
Logistic regression
Predicting house prices with regression

MODULE 3: CLUSTERING BASED LEARNING

Definition
Types of clustering
The k-means clustering algorithm

MODULE 4: DATA MINING

Introducing data mining
Decision Tree
Affinity Analysis
Clustering

MODULE 5: CLASSIFICATION – SENTIMENT ANALYSIS

MODULE 6 NATURAL LANGUAGE PROCESSING

Install nltk
Tokenize words
Tokenizing sentences
Stop words with NLTK

Stemming words with NLTK
Speech tagging
Sentiment analysis with NLTK

MODULE 7: MAKING SENSE OF DATA THROUGH VISUALIZATION

Introducing matplotlib
Bar Charts
Line Charts
Scatter plots
Bubble charts

MODULE 8: WORKING WITH OPENCV

Setting up opencv
Loading and displaying images
Applying image filters
Tracking faces
Face recognition

MODULE 9: PERFORMING PREDICTIONS WITH LINEAR REGRESSION

Simple linear regression
Multiple regression
Training and testing model

MODULE 10: SUPPORT VECTOR MACHINES(SVM)

MODULE 11: NEURAL NETWORKS