



# BUSINESS ANALYTICS USING PYTHON

Two Days Intensive Certificate Hands on Training Program

**Date:** October 12<sup>th</sup> & 13<sup>th</sup> 2019

Last date of Registration is 09<sup>th</sup> October 2019



This course is intended to give a holistic understanding on statistical & machine learning and its application using Python platform. The course will cover

- ✓ An introduction to business analytics
- ✓ An introduction to Python platform for data analysis
- ✓ An introduction to supervised machine learning algorithms
- ✓ An introduction to unsupervised machine learning algorithms
- ✓ Understanding of various sampling strategies and its efficacy in learning process
- ✓ An introduction to ensemble methods for handling imbalanced data
- ✓ Gradient descent algorithm and its application in finding the optimal solution
- ✓ Hands-on using the Python code and the real life dataset
- ✓ Introduction to different packages which can be used in Python for making robust and complex machine learning models

## RESOURCE FACULTY

A very highly specialized expert resource faculty panel with very rich knowledge from Academia - highly reputed and leading Educational Institutions and Senior Executives from companies, with deployment skills, practicing Business Analytics concepts successfully involve and contribute.

## Admission

1. Restricted to 20 on First Come First Serve Basis.
2. Last date of Registration 03-September-2019.

**Certificate** will be awarded to all the participating delegates.

## HARDWARE AND SOFTWARE

1. Participants should bring their laptop (preferably Windows 7 or higher/ Mac OS installed).
2. Operating System (any of the following):
  - Windows (Version XP or later) is required.
3. Minimum 8 GB RAM on the system is advisable. 16 GB is preferable.

## PAYMENTS DETAILS

**Course Fee:** ₹ 5,000/-Includes professional fee (Exclusive of TDS), Course Kit, Lunch & refreshments, Certificate, etc.

Payment can be made by cheque / DD in favour of "AU TVS Centre for Quality Management" and send through courier or in person.

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**COURSE CONTENT**

Session	Day 1	Day 2
<b>I</b>	<b>Introduction to Business Analytics</b> <ul style="list-style-type: none"> <li>✓ What is Business Analytics</li> <li>✓ Why is it needed and how industries are adopting it</li> <li>✓ Different components of analytics</li> <li>✓ Applications of analytics in different domains</li> <li>✓ Different types of machine learning algorithms–Supervised, Unsupervised and Reinforcement learning</li> </ul>	<b>Logistic Regression</b> <ul style="list-style-type: none"> <li>✓ Introduction to logistic regression</li> <li>✓ Logistic regression diagnostic: Classification Matrix, Sensitivity, Specificity, ROC Curve</li> <li>✓ Strategy to find the optimal cut-off</li> <li>✓ Case study using logistic regression techniques</li> <li>✓ Hands-on using Python code</li> </ul>
<b>II</b>	<b>Overview of Anaconda framework and Python</b> <ul style="list-style-type: none"> <li>✓ Variables</li> <li>✓ Objects</li> <li>✓ Loops</li> <li>✓ Conditions</li> <li>✓ Function</li> </ul>	<b>Decision Trees</b> <ul style="list-style-type: none"> <li>✓ Decision tree – Classification and regression trees (CART), Gini Index</li> <li>✓ Case study using decision tree techniques</li> <li>✓ Hands-on using Python code</li> </ul> <b>KNN (K-Nearest Neighbors) and K-means</b> <ul style="list-style-type: none"> <li>✓ Introduction to KNN algorithm</li> <li>✓ Implementing KNN algorithm for imputation</li> <li>✓ Introduction to clustering–K Means algorithm</li> <li>✓ Hands-on using Python code for KNN and K–Means algorithm</li> </ul>
<b>III</b>	<b>Python Data structures</b> <ul style="list-style-type: none"> <li>✓ lists,</li> <li>✓ tuples,</li> <li>✓ dictionaries,</li> <li>✓ sets</li> </ul>	<b>Machine Learning: Sampling Strategy</b> <ul style="list-style-type: none"> <li>✓ What is Machine learning</li> <li>✓ Different sampling strategies–Bootstrapping, Up-Sample, Down-Sample, Synthetic Sample, Cross-Validation Data</li> </ul>
<b>IV</b>	<b>Introduction to Pandas</b> <ul style="list-style-type: none"> <li>✓ Data ingestion,</li> <li>✓ descriptive statistics,</li> <li>✓ visualization,</li> <li>✓ frequent data operations,</li> <li>✓ merging data frames</li> </ul>	<b>Machine Learning (Ensemble Methods)</b> <ul style="list-style-type: none"> <li>✓ Introduction to Bagging–Random Forest</li> <li>✓ Introduction to Boosting– Adaptive boosting</li> <li>✓ Case study of an imbalanced data and application of sampling strategies &amp; ensemble methods</li> <li>✓ Hands-on using Python code on an imbalanced data.</li> </ul>





## Business Analytics using Python Registration Form

Name (Mr. / Ms.) :

Name of the Organization :

Designation :

Academic Qualification :

Address :

Mobile :

E-Mail :

AU TVS CQM program certificate holders: Yes / No (Enclose certificate copy)

**Special Concession 10% discount for AU TVS CQM program certificate holders with certificate copy.**

Payment can be made by cheque / DD in favour of "**AU TVS Centre for Quality Management**" and send through courier or in person.

Enclose the Cheque / DD No. :

Amount: **5,000/-**      Date:

Bank:

Signature with date

**To:**  
**The Director,**  
**AU TVS Centre for Quality Management,**  
**Anna University, Chennai – 600 025.**