



Python For Data Science Advance Certificate Course

Live Course



Why AISECT Learn?



175+ University
certified courses



Career driven
learning rooted in a
37 year legacy



475 Industry partners
for recruitment



**Skill
upgradation**
by industry
experts



Dedicated job
portal & placement support



Course Overview

Learn to program in Python and handle classes, libraries, decorators and multithreading. This course will take you through the concepts of advanced Python. Practice hands-on exercises as you learn with our industry expert. Master the best practices, libraries and techniques of **Python programming**.



Course Objectives

At the end of this Advanced Python training course, you will be able to

- ✓ Develop in depth understanding of Data Science
- ✓ Gain hands on experience in Data Visualization skills
- ✓ Explain the concepts of Python
- ✓ Describe Standard Libraries
- ✓ Understand Decorators



Skills You Will Learn

- ✓ Python role in Data Science
- ✓ Statistics
- ✓ Python Programming
- ✓ Python - Pandas
- ✓ Numpy
- ✓ Data Visualization



Program Highlights

Instructors

S. Veenadhari,
Avik Sarkar and
Utpal Chakraborty



Duration

9 Weeks

Eligibility

Graduation in
Engineering / Science



No. of Modules

Six Modules

Placement Training

Yes



Language

English

Shareable Certificate

Yes



Webinar by Industry Experts

Yes

No. Of Live Sessions

7 Sessions





Program Syllabus

What is Data Science?

- Introduction
- Real life examples with applications
- Data Scientist job roles and responsibilities
- The most promising job of the 21st Century
- Machine Learning vs. Data Science vs. AI

Introduction to Python

- Python Introduction
- Installation of Anaconda Navigator
- Jupyter Notebook Interface
- How to Open, Save and Rename a file
- Variables and Data Types
- Python Strings
- Loops (Conditional)
- Loops (Iterative while)
- Loops (Iterative For)
- Python Functions (Built in, Lambda, User defined functions)
- Lists
- Tuples
- Sets
- Dictionaries

 **Hands on Live Virtual Session on Introduction to Python**



Program Syllabus

Data Manipulation and Data Analysis Tools

- Numpy Arrays in Python
- Three Dimensional Arrays Indexing and Slicing
- Matrices
- Pandas in Python
- Importing CSV, Excel Files
- Exporting CSV File

▶ **Hands on Live Virtual Session on Data Manipulation and Data Analysis Tools**

Python - Statistics

- Basic descriptive statistics with Numpy and applying statistical functions on matrices
- Linear Algebra with NumPy
- Numpy Random Numbers
- Probability distributions using NumPy
- Normality test with SciPy

▶ **Hands on Live Virtual Session on Python Statistics**

Python - Pandas

- Pandas Data Frames
- Querying Data in Pandas
- Data Aggregation with Pandas Data Frames
- Concatenating and appending Data Frames
- Joining Data Frames

- Statistics with Pandas Data Frames
- Handling Missing Data
- Pivot Tables
- Plotting in Pandas

▶ **Hands-on Live Virtual Session - Python Pandas**



Program Syllabus

Data Visualization in Python

- The matplotlib package
- Basic matplotlib Plots
- Logarithmic Plots
- Scatter Plots
- Three Dimensional Plots
- Lag Plots
- Autocorrelation Plots
- Plot.ly
- ▶ **Hands on Live Virtual Session - Data Visualization in Python**

▶ **Revision Session- Live Virtual Session/Finishing School Program**

▶ **Webinar by Industry Experts**



Our Instructors



Dr. S. Veenadhari

Faculty, Associate Professor, Department of Computer Science Engineering, Rabindranath Tagore University (RNTU)



Dr. Avik Sarkar

Mentor, Analytics, Data Science, AI & Public, Policy Indian School of Business (ISB)



Utpal Chakraborty

Industry Expert, Data Scientist and AI researcher, Chief Digital Officer, Allied Digital

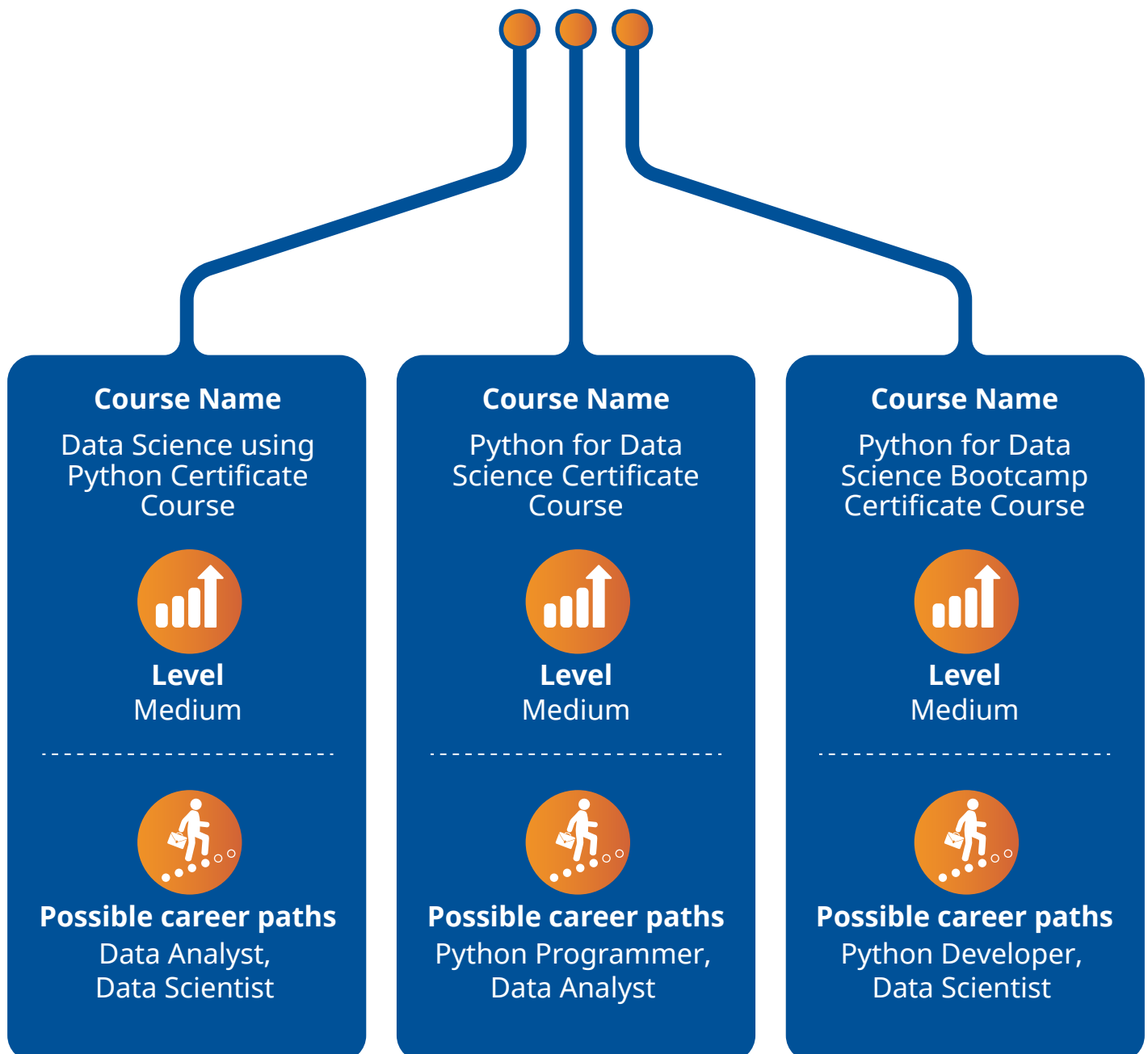


Additional courses you can avail



Data Science

The area of study that involves extracting insights from vast amounts of data by using various scientific methods, algorithms, and processes. It is the most promising field right now with tremendous opportunities for advancement in the future.



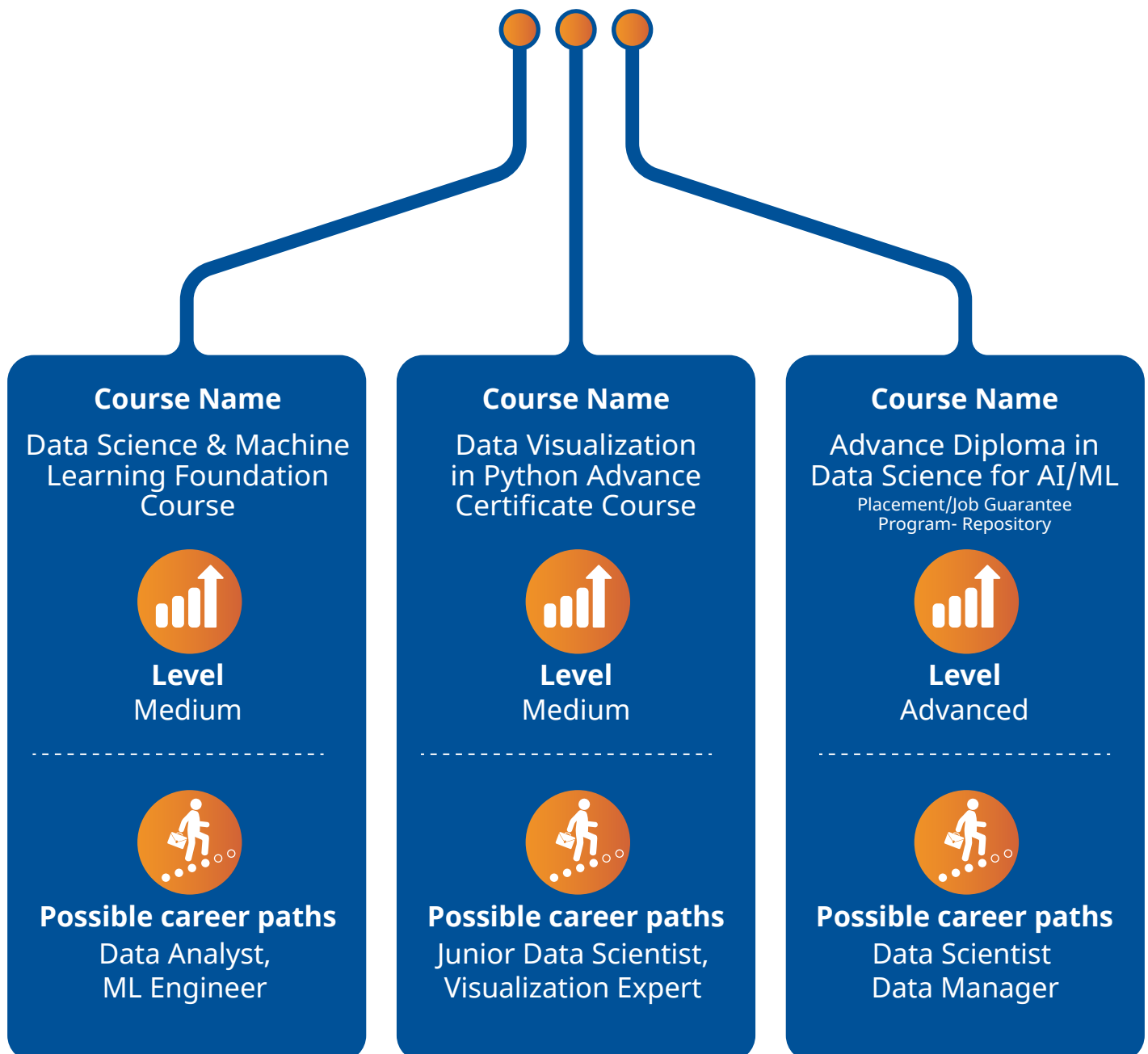


Additional courses you can avail



Artificial Intelligence

The ability of a computer or a robot to do tasks that are usually done by humans because they require human intelligence. With the developments taking place in the world of technology, Artificial Intelligence and Machine learning are the up and coming career options for the future.





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