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Data Science using Python Certificate Course

Why AISECT **Learn?**

175+ University certified courses

475 Industry partners for recruitment

Career driven learning rooted in a **37 year legacy**

Skill upgradation by industry experts

Dedicated job portal & placement support

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Course Overview

Get acquainted to the fundamental **Python tools** used for preparing the data for analysis and familiarize yourself with data science tools for processing the data, and using **Data Science** techniques to create meaningful insights and predictions.

Course Objectives

At the end of this course, you will master the following:

- ☑ Data Manipulation
- ☑ Data Analysis Tools
- ☑ Python Statistics
- ☑ Python Pandas
- ☑ Data Visualization

Skills You Will Learn

- ☑ Basic Python Tools
- ☑ Pandas
- ☑ Numpy
- ☑ Data Visualization Techniques

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Program Highlights

Instructors
S. Veenadhari,
Avik Sarkar and
Utpal Chakraborty

Duration
3 Weeks

Eligiblity
Graduation in
Engineering / Science

No. of Modules
Seven Modules

**Placement
Training**
Yes

Language
English

**Shareable
Certificate**
Yes

**Webinar by
Industry Experts**
Yes

**No. Of Live
Sessions**
7 Sessions

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Program Syllabus

What is Data Science?

- Introduction to Data Science
- 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

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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

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

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

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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

Applications in Industry - BFSI

- In consultation with 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

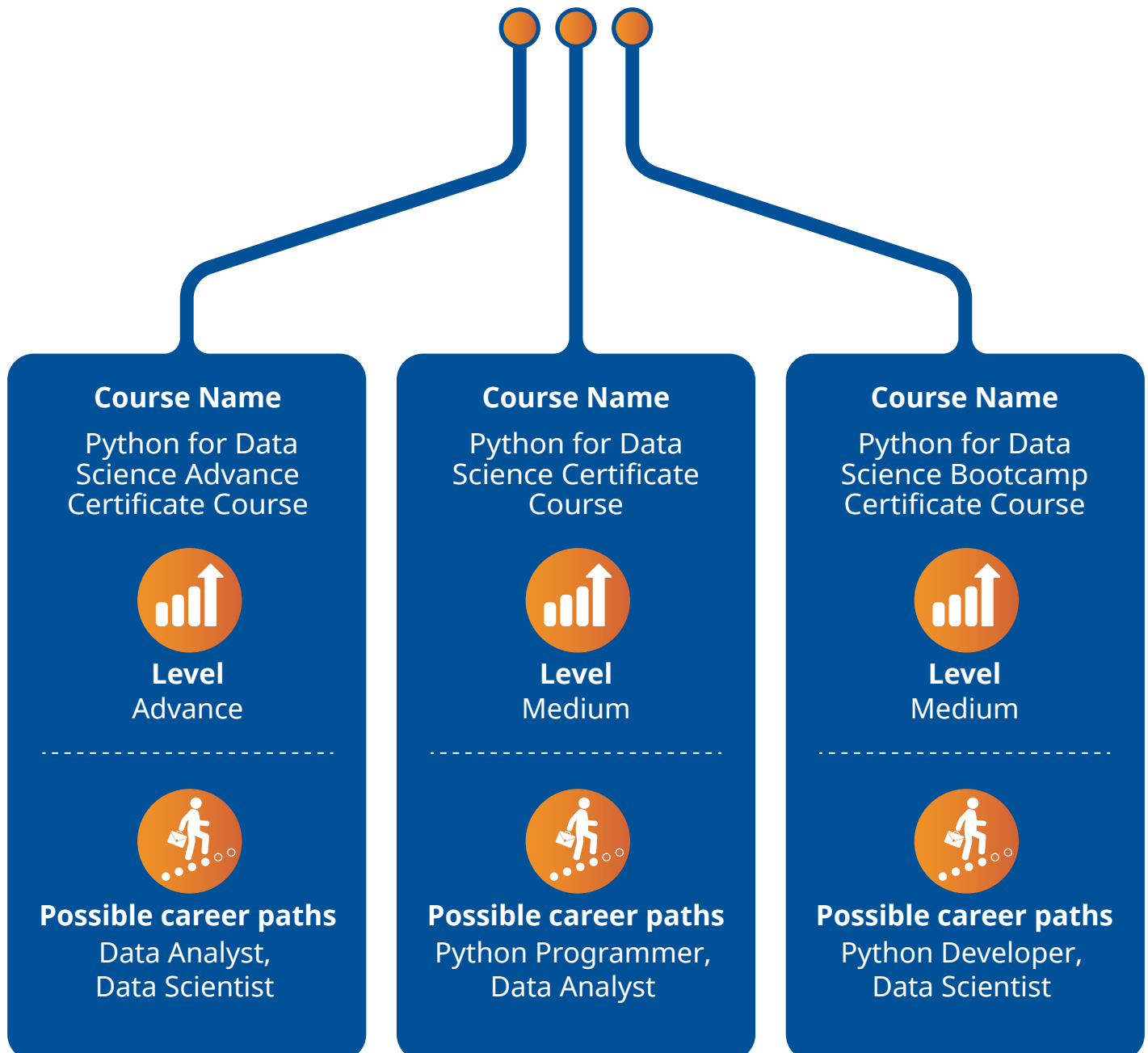Industry Expert, Data Scientist and AI researcher, Chief Digital Officer, Allied Digital

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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.

Course Name
Python for Data Science Advance Certificate Course

Level
Advance

Possible career paths
Data Analyst, Data Scientist

Course Name
Python for Data Science Certificate Course

Level
Medium

Possible career paths
Python Programmer, Data Analyst

Course Name
Python for Data Science Bootcamp Certificate Course

Level
Medium

Possible career paths
Python Developer, Data Scientist
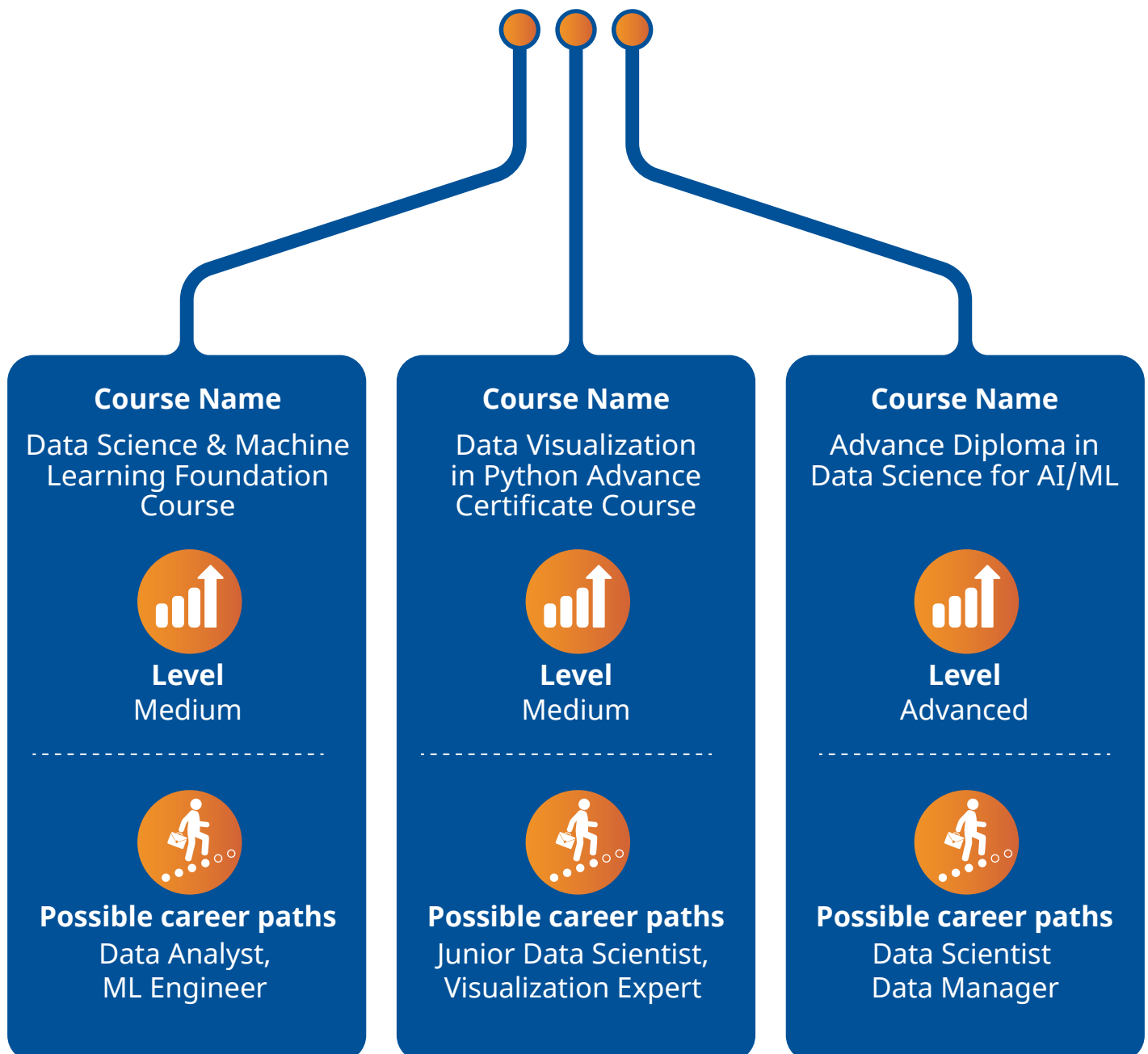
Artificial Intelligence

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.

Course Name
Data Science & Machine Learning Foundation Course

Level
Medium

Possible career paths
Data Analyst,
ML Engineer

Course Name
Data Visualization in Python Advance Certificate Course

Level
Medium

Possible career paths
Junior Data Scientist,
Visualization Expert

Course Name
Advance Diploma in Data Science for AI/ML

Level
Advanced

Possible career paths
Data Scientist
Data Manager

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