



# Excellence Educational Academy

Alipore, Kolkata

[Where **TALENT** is the keyword]

Sister Concern is



DIGITAL EDUCATION  
WHERE TALENT IS THE KEYWORD

## e-DIGITAL LEARNING

AN INSTITUTE FOR MULTIDISCIPLINE TECHNICAL COACHING CLASSES & GUIDANCE  
[ Founded and Directed by a Renowned Academicians & Corporate Professionals ]

Ref. No. :EEA/DSE/NON-IT/2023

Date :21/01/2023

**CORPORATE JOB ORIENTED TRAINING (ONLINE / OFFLINE)**

**Data Science-IT Professional Course Curriculum for Non-IT Participants**

**Name of the Corporate Training Course: Data Science Enthusiast**

**Duration: 80 Hours [70 hours + 10 hours (Capstone Project)]**

**Delivery Mode:** Virtual Instructor-led / Classroom-based

**Prerequisites:** High-school mathematics | Laptop/Desktop with internet connection

**Tools:** Jupyter Notebook / R Studio, Tableau

**Python / R packages:** NumPy, Pandas, Matplotlib, Seaborn, Scikit-Learn / dplyr, data.table, ggplot2, janitor, caret, mlr

**1. Basic Course in Mathematics & Applications [4]**

- a. Set Theory
- b. Logic
- c. Matrix Theory
- d. Graph Theory

**2. Basic Statistics & Probabilities [8]**

- a. Descriptive Statistics
- b. Measure of Central Tendency (Mean, Median, Mode)
- c. Measure of Variability (Range, S.D, Variance, Interquartile range)
- d. Correlation & Covariance
- e. Probabilities
- f. Distribution and Sampling
- g. Central Limit Theorem
- h. Inferential Statistics : Estimation & Hypothesis Testing

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- 3. Fundamental Concepts of Computer Systems & Computer Programming [6]**
  - a. Introduction to Computer
  - b. Basic Structure/Components & Functionalities of Computer Systems
  - c. Why Computer?
  - d. Computer Languages
  - e. Concept of OS
  - f. Basic Concepts of Procedural Programming Languages (PPL) with sample Program and Concept of OOPs.
  
- 4. Introduction to Python [8]**
  - a. Data Types, Variables, Operators
  - b. Control Flow
  - c. Looping
  - d. Functions and Recursion
  - e. Exception and File Handling
  - f. Data Science Libraries – NumPy, Pandas, Matplotlib, Seaborn
  
- 5. Artificial Intelligence & Machine Learning Fundamentals [14]**
  - a. Introduction to AI & ML
  - a. Connection between AI and ML
  - b. Types of learning
  - c. Applications of machine learning
  - d. Python Programming for Machine Learning
  - e. Regression vs Classification vs Clustering
  - f. Supervised & Un-Supervised Learning
  - g. Large Scale Data Visualizations
  
- 6. Introduction to Data Science [8]**
  - a. Organizational role of Data Science
  - b. Knowledge Areas, Planning and Monitoring
  - c. Business Understanding and Strategy Analysis
  
- 7. SQL for Data Science [10]**
  - a. Database Basics
  - b. SQL Basics
  - c. Advanced SQL
  
- 8. Data Visualization Using Tableau/PowerBI [14]**
  - a. Introducing Tableau/ PowerBI
  - b. Loading different types of data in Tableau/ PowerBI
  - c. Different types of charts in Tableau/ PowerBI
  - d. Filters in Tableau / PowerBI
  - e. Working with Geographical Locations and Maps
  - f. Dashboard

## 9. Capstone Project [10 Hours]

- a. Case Study: Marketing
- b. Case Study: Supply Chain Management
- c. Case Study: Finance Domain
- d. Case Study: Healthcare

### Capstone Project [10 Hours]

#### A) Handwritten Digits Recognition

**AI Project Idea** – Digits written by humans vary a lot in curves and sizes as they are hand-drawn and everyone's writing is not the same.

It is a great way to start artificial intelligence by building a handwritten digits recognition system that can identify the digit drawn by humans.

#### B) Cartoonify Image with Machine Learning

**ML Project Idea:** Transform images into its cartoon. Yes, the objective of this machine learning project is to CARTOONIFY the images.

Thus, you will build a python application that will transform an image into its cartoon using machine learning libraries.

### About Course

- If You Want To Take This Course **Online** , The Course fees Will be **2000 rupee/month.**
- If You Want To Take This Course **Offline**, The Course fees Will be **3000 rupee/month.**
- Course Duration – **5 Months i.e. 80 Hours [70 hours + 10 hours (Capstone Project)]**
- Payment - (Strictly in MONTHLY system) and ONE-month advance, which will be, adjust in the last month of the course.
- Small group of Study (At-Least **10 students** & At-most **15 students** in ONE group).
- The Classes Will be taken **2 Days/Week and 2 Hours /Day.**
- **On Successful Completion of the Course along with Hands-on Assessment, Certificate will be Awarded.**
- **After Completion of the Course, INTERNSHIP on the same Domain Technology will be provided for doing hands-on work on real-life Industrial Project followed by Job Assistance(Reference for up to 3 Interviews) in IT/SW Industry.**
- **Both Theoretical & Hands-on Training will be Provided by Highly Qualified & IT Experienced Senior Professionals those are fully settled in IT Industry since long and having Job Referral capacities.**

**If you are really interested for building a Career with Excellent hi-end Hands-on Studies followed by IT Internship & Job in Data Science Technology Domain area in IT/SW Industry, then only Contact below mentioned contact details for Enrollment into the Course.**