

# FOUNDATION & INTERMEDIATE DIPLOMA IN BIG-DATA/ DATA SCIENCE WITH ARTIFICIAL INTELLIGENCE

## Who can do?

- People who are fresh intermediate or Bachelors and like to develop their careers in data science/big-data with artificial intelligence must join this program.
- Other People who are willing to learn and join our diploma in big data with artificial intelligence may also join.
- Intermediate pass and under graduate may also join the program.

100,000+ Students have been Trained

> since 1997

Invest in
People the
only Asset
that Appreciates



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#### **Inauguration**

The Training Program will be inaugurated by a senior member of 3D EDUCATORS

#### **Program Structure**

No of classes per week
Duration of each class
Guided-Hours
Non- Guided Hours
Total Duration
Total Months

O2 Class
O2 Hour
36 Hours
46 Hours
48 Hours

#### **Other Learning Activities**

Classroom Assignments 04
Presentations by Trainees 01

In Affiliation with





#### **Course Content:**

- What is Artificial Intelligence?
- What is Big Data or Data Science
- Why to choose and learn Big Data or Data Science
- Learn Python for developing projects related Data Science & AI
- Setup your environment
- Python Variables and Data types
- Lists Indexing and Operations
- Conditions statements
- Python Loops
- Access index of elements and List Comprehensions
- Dictionaries and tuples
- Looping Over Dictionaries
- extract keys and values using items()
- Dictionaries Comprehensions
- Functions
- Classes
- Python Libraries
- Basic Machine Learning: Regression and Classifier
- Preprocessing Technique
- Featured engineering Data Augmentation
- Data Filtration
- Basic Supervised learning techniques



# **Python for Machine Learning and Data Science**

Python Basics: Setting up Python and Jupyter Notebook and Python Development Environments. An introduction to the basic concepts of Python. Learn how to use Python interactively and by using a script. Create your first variables and acquaint yourself with Python's basic data types. Variables and types, variable assignment, calculations with variables, other variable types, type conversation. Conditions and loops handling in a bit large program.

Numerical Data handling: Python list and fundamentals with how to use in programming, Functions, and packages, how to use functions, methods and packages to efficiently leverage the code that brilliant Python developers have written, NumPy is a fundamental Python package to efficiently practice data science. Learn to work with powerful tools in the NumPy array, and get started with data exploration, practice examples.



# <u>Featured Engineering with Machine Learning towards</u> <u>Data Science/Big-Data</u>

Supervised Learning: Introduction to supervised learning, practice the different several aspects of supervised machine learning, such as selecting the optimal feature—subset, regularization to avoid model over-fitting, featured engineering, and ensemble models. Regression, regularization, avoiding over-fitting. Classification model features, logistic regression baseline classifier, ensemble methods, bootstrap aggregation, boosting, XG Boosting.

Unsupervised Learning: Unsupervised learning is used to apply feature extraction and visualization techniques for dimensionality reduction and clustering methods to select not only an appropriate clustering algorithm but an optimal cluster number for a dataset. Clustering analysis, clustering algorithms, k-means clustering, hierarchical agglomerate clustering, what is optimal k, silhouette method, Elbow method.

Model selection and Evaluation: bootstrapping and cross-validation, validating model performance, Decision tree, A forest of decision trees, Model evaluation: imbalanced classification models, imbalanced class metrics, resampling techniques, random forest vs gradient boosting.

- Understand the definition of a range of neural network models.
- Have an understanding of how to choose a model to describe a particular type of data.
- Understand the mathematics necessary for constructing novel machine learning solutions.
- Be able to implement and evaluate common neural network models for language.



## **TERMS & CONDITIONS**

#### WITHDRAWAL FROM THE DIPLOMA

Students are not allowed to withdraw from the Diploma. If a student cannot continue the Diploma his/her fee will be forfeited.

#### **CONDUCT AND DISCIPLINE**

A disciplinary action, leading to rustication, will be taken against students whose conduct is found objectionable at any time during the course of study. Reference will be made to 3D Educators code of conduct.

#### **EVALUATION AND GRADING**

The performance of students is evaluated through continuous observation of a student's performance in the Diploma – class participation, submission of assignments, quizzes and exercises.



The student will be examined through three hourly exams conducted at the midterm and a final exam at the end of the program. Total marks for passing the Diploma will be 60 out of a total of 100.

Students who do not meet the attendance or any other eligibility criteria will not be allowed to appear in the final examination.

The following grading plan will be applicable for the Diploma:

Α	87 - 100
B+	81 -86
В	72 - 80
C+	66 - 71
С	60 - 65
F	below 60



Students who are unable to appear for the final exam are required to submit a written application stating the reason for not appearing for the exam. 3D Educators reserves the right to approve or deny such applications. If approved, the student will be allowed to sit for the exam within one month. Failure to do so, the student will be resubmit the examination fee and sit the future schedule exam. Without passing of the exams no certification will be awarded.



#### **ONLINE LIVE CLASSES FACILITY AVAILABLE**

- Instructor Led Training
- Real Time Presentations
- Interactive Classes
- Complete Notes and Other Stuff shall be provided through our Secure Student Login Member's Area
- For Online Live Classes, you may please download the Admission Form through our website http://www.3deducators.com. Fill it properly and attached the required document along with Picture and send back to info@3deducators.com with scanned fee submitted voucher in the bank.
- For Pakistan you may submit the fee at any MCB Branch with the title of "3D EDUCATORS-TRAINERS & CONSULTANTS".
- If you are outside Pakistan then you may transfer via Bank to Bank or any western union, Fast Track, Money Gram or else International Transfer Body.
- After Admission, if you don't have GMAIL Account then you are requested to kindly make one GMAIL Account and shared it info@3deducators.com. Then further correspondence shall be made by our institute official.
- Extra Bandwidth Charges shall be incurred.

#### **DISTANCE NOT MATTER**

You can join in the live classes Sessions of 3D EDUCATORS – TRAINERS & CONSULTANTS from anywhere of the world.



#### **PRECAUTIONARY MEASURES**

- During Classes, you are requested to make sure that you are in isolated room, where no noise should be there except your voice.
- Kindly Switch Off your Cell Phone during the class, because it will disturb the quorum of class.
- If you have taken the admission in the course online lonely, then ethically it is recommended and suggested that you alone in the class.
- Recording of Lectures are not allowed at your end.

This world is emerging and growing in the 21st Century very rapidly because of latest and remarkable technologies and its advancement. Due to advancement of technology, we 3D EDUCATORS offer Live Interactive class sessions

3D EDUCATORS believe on Information Technology and its systems. Now you can also avail this facility at your home.

#### **CONTACT US**

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Get the Admission Form

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