Dhaapps Machine Learning/Datascience Training and Internship
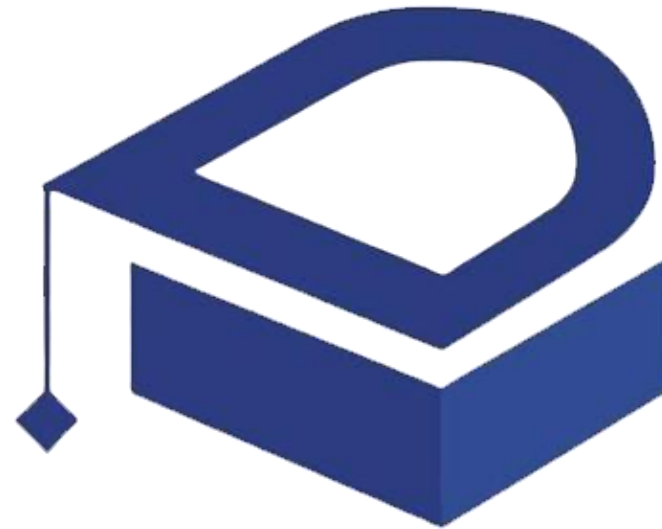
Duration : 8 weeks

Training : 4 weeks

Project : 4 weeks

MODULES:

- ➢ Python for Datascience
- ➢ Statistics
- ➢ Exploratory Data Analysis
- ➢ Machine Learning

Free Python Programming

Introduction to Python

What is Python?

WHY PYTHON?

History

Features – Dynamic, Interpreted, Object oriented, Embeddable,
Extensible, Large standard libraries, Free and Open source

Why Python is General Language?

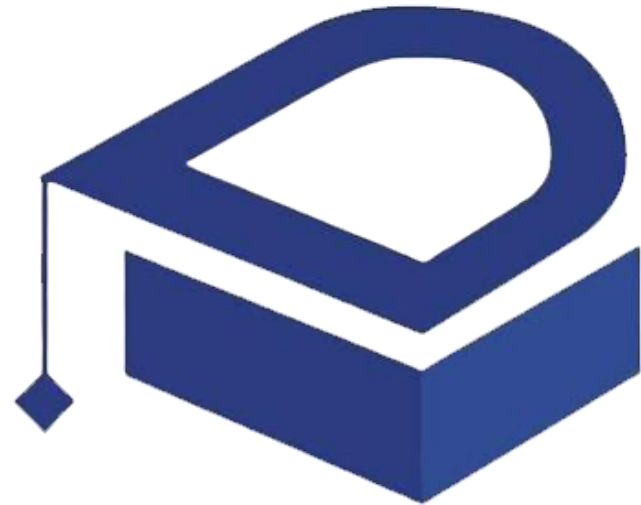Limitations of Python

Python Language Fundamentals

Keywords

Identifiers

variables

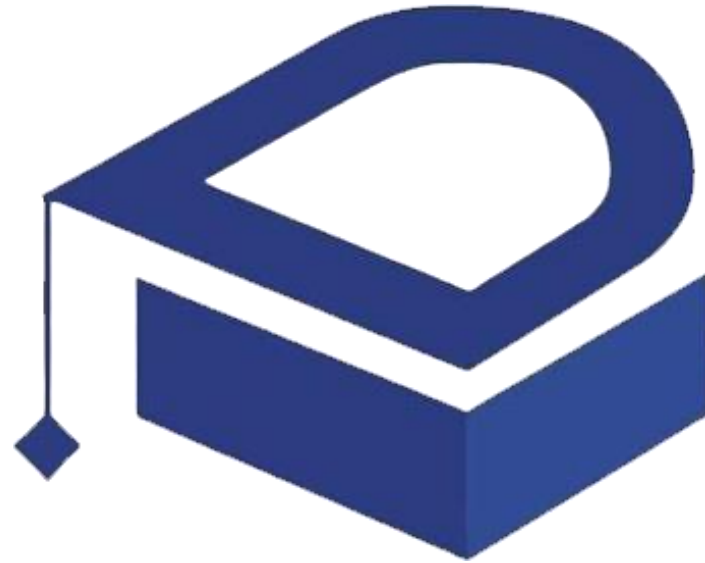Data types

Python VS JAVA

Python Syntax

Operators

Arithmetic Operators

Comparison Operators

Python Assignment Operators

Logical Operators

Bitwise Operators

Shift operators

Membership Operators

Identity Operator

Strings

What is string

Representation of Strings

Processing elements using indexing

Processing elements using Iterators

Manipulation of String using Indexing and Slicing

String operators

Methods of String object

String Formatting

String functions

String Immutability

List Collection

What is List

Need of List collection

Different ways of creating List

List comprehension

List indices

Processing elements of List through Indexing and
Slicing

List object methods

List is Mutable

Mutable and Immutable elements of List

Nested Lists
List_of_lists

Tuple Collection

What is tuple?
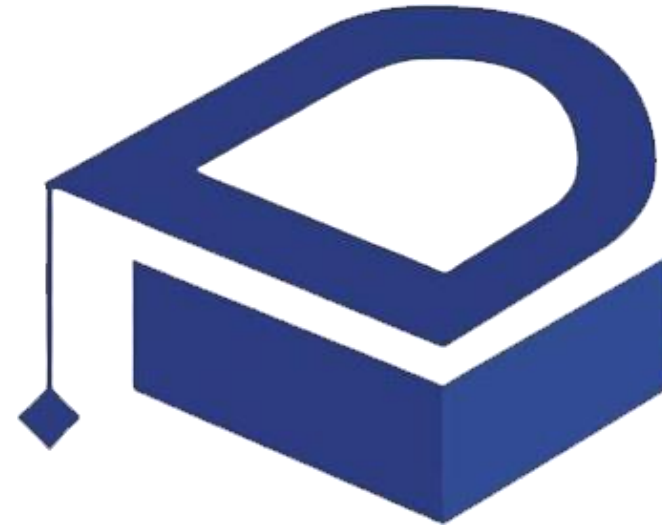
Different ways of creating Tuple

Method of Tuple object

Tuple is Immutable

Mutable and Immutable elements of Tuple

Process tuple through Indexing and Slicing

List v/s Tuple

Set Collection

What is set?

Different ways of creating set

Difference between list and set

Accessing elements of set

Python Set Methods

Python Set Operations

Union of sets

functions and methods of set

Python Frozen set

Difference between set and frozenset ?

Dictionary Collection

What is dictionary?

Difference between list, set and dictionary

How to create a dictionary?

Accessing values of dictionary

Python Dictionary Methods

Copying dictionary

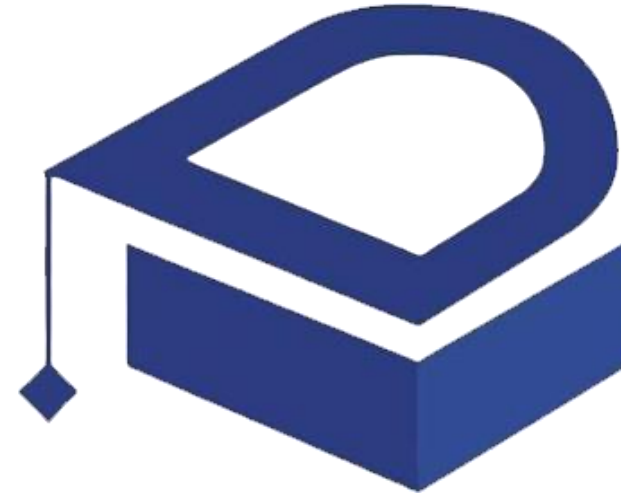Updating Dictionary

Reading keys from Dictionary

Reading values from Dictionary

Reading items from Dictionary

Delete Keys from the dictionary

Sorting the Dictionary

Python Dictionary Functions and methods

Functions

What is Function?

Advantages of functions

Syntax and Writing function

Calling or Invoking function

Classification of Functions

Lambda functions/Anonymous functions

map()

filter()

reduce()

Non local variables, global variables

Python Modules
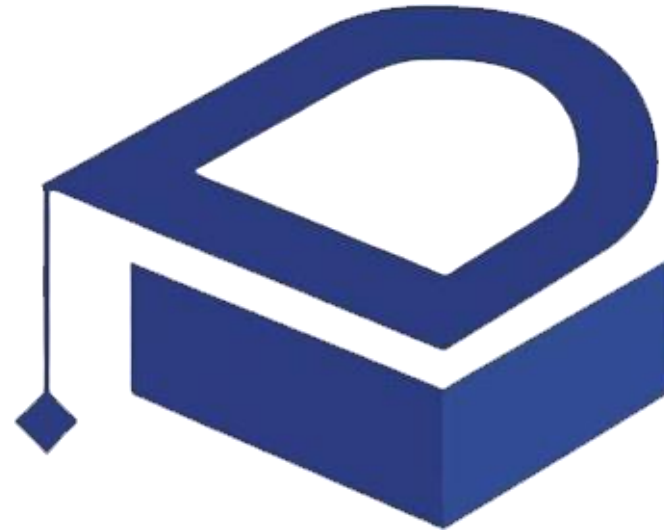
Importance of modular programming

What is module

Types of Modules – Pre defined, User defined.

User defined modules creation

Functions based modules

Import module

From ... import

OOPS

Procedural v/s Object oriented programming

Principles of OOP – Encapsulation , Abstraction (Data Hiding)

Classes and Objects

How to define class in python

Types of variables – instance variables, class variables.

Types of methods – instance methods, class method, static method

self' reference variable

Encapsulation(Data Binding)

What is polymorphism?

Overriding

i) Method overriding

ii)Constructor overriding

Overloading

iii)Method Overloading

iv)Constructor Overloading

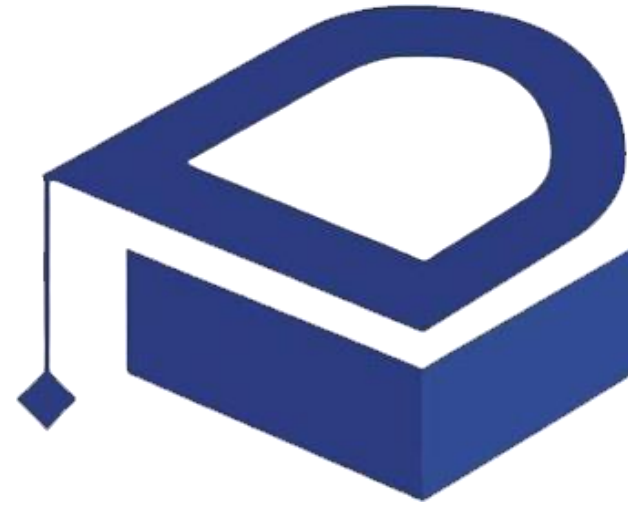inheritance – single , multi level, multiple, hierarchical and

hybrid inheritance and Diamond inheritance

Constructors in inheritance

Object class

super()

Abstraction

Exception Handling

Types of Errors

What is Exception?

Why exception handling?

Syntax error v/s Runtime error

Try with multi except

Handling multiple exceptions with single except block

Finally block

Try-except-finally

Try with finally

Raise keyword

Custom exceptions / User defined exceptions

Need to Custom exception

File &Directory handling
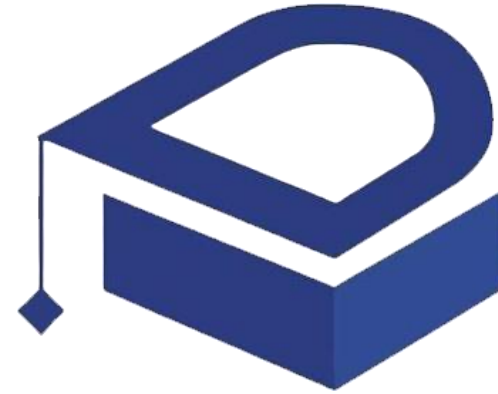
Introduction to files

Opening file

File modes

Reading data from file

Writing data into file

Appending data into file

Line count in File

Python for Datascience

Numpy
Introduction to Numpy

Numerical operations on Numpy

Matrices

N dimension arrays

Indexing and Slicing

Pandas
Getting started with pandas

Dataframe Basics

Key operations on Dataframes

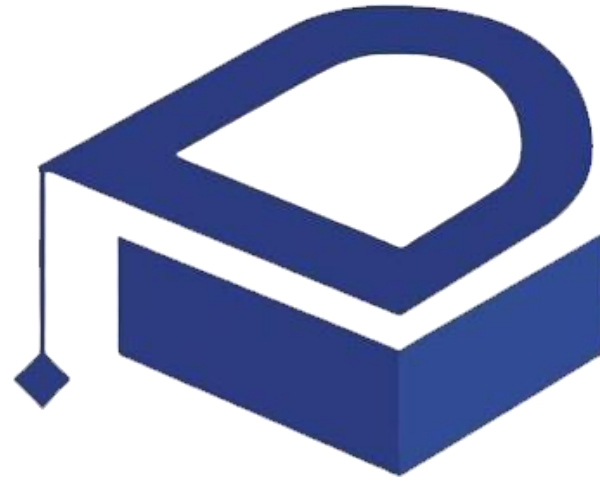Merge ,join,concat

Matplotlib
Histogram

BarGraph

Scatterplot

Pie chart

statistics

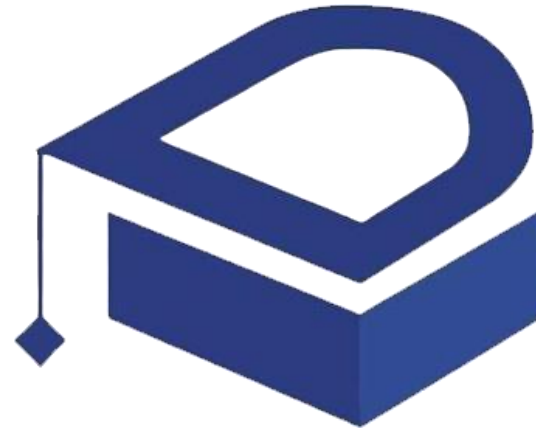Measures of central
Tendency

Mean

Median

Mode

Range

Inter Quartile range

variance

standard Deviation

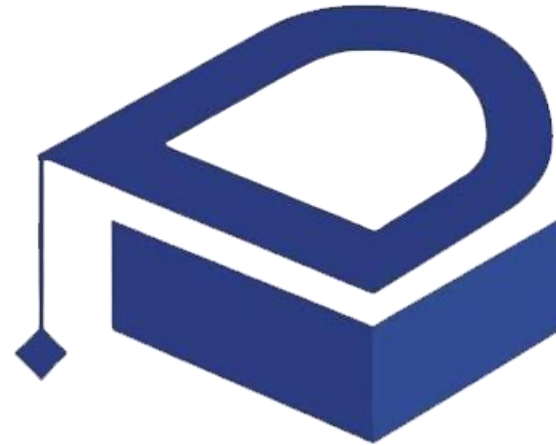Correlation

Supervised Machine Learning

Linear regression
Logistic regression
K-nearest neighbor
Decision Tree
Random forest

Evaluation Techiniques

Classification

Confusion matrix

Accuracy

 Precision

Recall

Regression

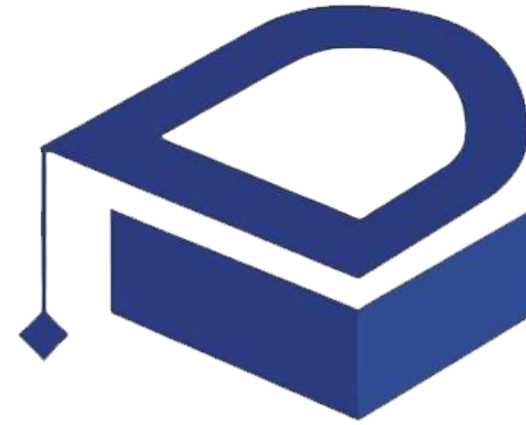Mean Absolute Error(MAE) Mean
Squared Error(MSE)

RMSE

RMSLE

R squared Adjusted R
Squares

Unsupervised Machine Learning

K-means clustering.

Note: For Every algorthim there will be one case study

Dhaapps 2022 Monsoon Internship outcomes:

1. Training certificate
2. Internship certificate
3. project completion certificate
4. Life Time access to the content and 200+projects with source codes
5. Huge community and dedicated job updates
6. Free Mini and Major Projects with documentation
7. Free Materials related to your interested internship will be shared

Registration link :

https://imjo.in/Yrzbtg

For more info WhatsApp 9912520841