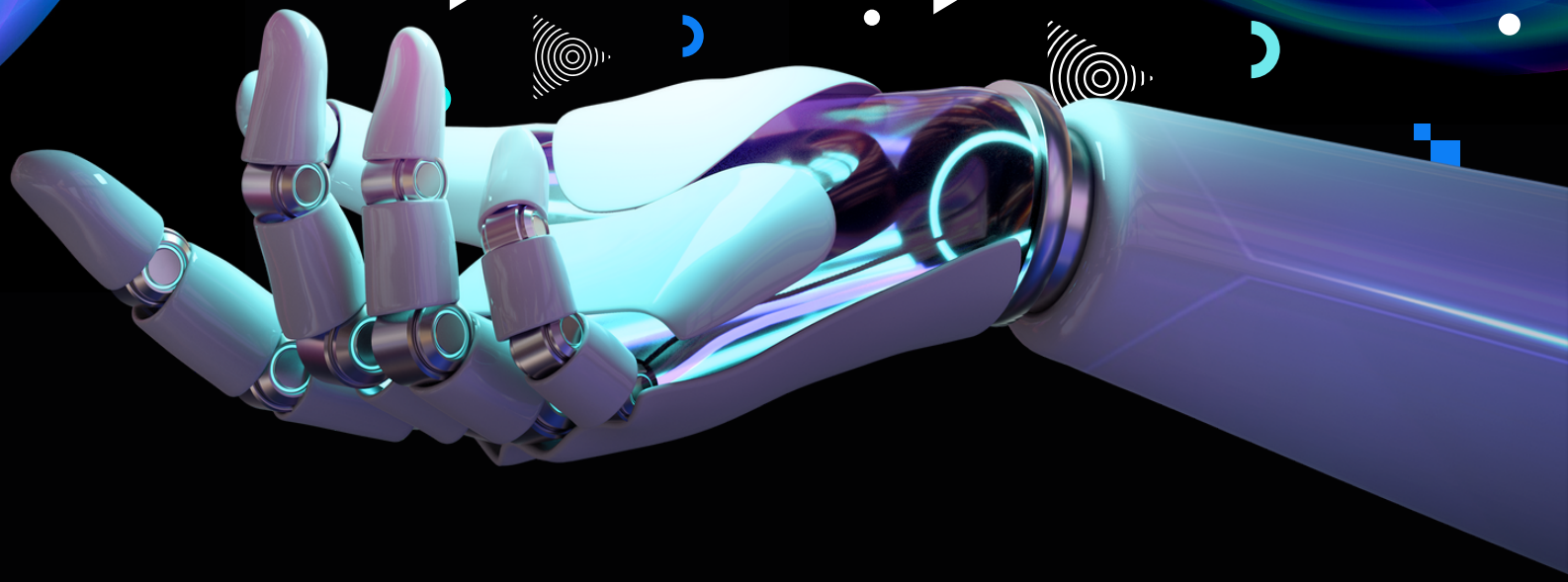
MITHIBAI COLLEGE OF ARTS, CHAUHAN INSTITUTE OF SCIENCE & AMRUTBEN JIVANLAL COLLEGE OF COMMERCE AND ECONOMICS(AUTONOMOUS)



ARTIFICIAL INTELLIGENCE WITH PYTHON

Batch Commences from

12th December 2022

(Hybrid Mode)

Open for all Mithibai Students !

ABOUT SVKM

Shri Vile Parle Kelavani Mandal is a Public Charitable Trust registered under the Society's Registration Act and Bombay Public Trust Act. From its humble beginnings in 1934, when it took over the Rastriya Shala, a school established in 1921 in the wake of the National Movement, the Mandal today has grown into a big educational complex imparting high-level education to more than 35,000 students.

ABOUT MITHIBAI

Mithibai College of Arts, Chauhan Institute of Science & Amrutben Jivanlal College of Commerce and Economics(Autonomous) is envisaged as the destination for the most promising and talented students, since its inception in the year 1961.
The college is Ranked 1st in Arts & Science and 2nd in Commerce in theWestern region and Mumbai city colleges as per ranking by India Today for the year 2021-2022.

COURSE DETAILS

After completion of the course, learners would be able to:

- Apply programming concepts of Python
- Use Python libraries to handle datasets
- Visualize the data using Python libraries
- Construct Regression models and Classification models
- Evaluate the results and performance of AI models using visualization in Python

LEARNING OBJECTIVES:

- To apply Python libraries on AI applications
- Acquire and demonstrate competency in applying Aritificial Intelligence and related concepts in domains of Economics, Finance and Biological Sciences
- To build simple supervised learning models

Course Fee

Rs 3,000/-

To register

Click Here !

OR

Scan Here

For more information visit

Degree college computer lab

Shri Vile Parle Kelavani Mandal's

MITHIBAI COLLEGE OF ARTS, CHAUHAN INSTITUTE OF SCIENCE & AMRUTBEN JIVANLAL COLLEGE OF COMMERCE AND ECONOMICS (AUTONOMOUS)

NAAC Reaccredited 'A' grade, CGPA: 3.57 (February 2016),

Granted under RUSA, FIST-DST & -Star College Scheme of DBT, Government of Indi Best College (2016-17), University of Mumbai

Affiliated to the

UNIVERSITY OF MUMBAI

Course: Add-on Course

Artificial Intelligence using Python

with effect from the Academic year 2022-23

A.C. No: 14

Agenda No : 4.4

Neelam Jain

Ashish Goramale

Dr. Amol Tojekar

Zahir I. Mulani

Jayshree Ravi Jayshree

Program: Add-on Course			
Course: Artificial Intelligence with Python – Hands-on Course			
Teaching Scheme		Evaluation Scheme	
Lecture (Hours per week)	Credit	Continuous Assessment and Evaluation (CAE) (Marks - 50)	Final Evaluation (Marks-50)
3	2	50	50

Outline of Syllabus: (per session plan)

Module	Description	No of hours
1	Basic Programming concepts of Python	10
2	Python for Artificial Intelligence	10
3	Supervised Learning Algorithms	10
	Total	**30**

Module	Artificial Intelligence with Python	No. of Hours/Credits 30/2
1	**Basic Programming concepts of Python**	10
	Introduction To Python - Installation and Working with Python Understanding Python variables Python basic Operators Understanding python blocks Python Data Types Declaring and using Numeric data types: int, float, complex Using string data type and string operations Defining list and list slicing, Use of Tuple data type and Dictionary. Conditional blocks using if, else and elif Simple for loops in python For loop using ranges, string, list and dictionaries Use of while loops in python Loop manipulation using pass, continue, break Building blocks of python programs Understanding string in built methods List manipulation using in built methods Dictionary manipulation Programming using string, list and dictionary in built functions	
2	**Python for Artificial Intelligence**	10
	Types of Data related to Artificial Intelligence, Introduction to standard machine learning datasets and interpreting the data, Correlation between data, Data handling techniques Python Libraries – numpy, pandas, matplotlib, sci-kit learn Data Frames – Creating data frames from a csv file, list, array and dictionary, Operations on Data Frames, Exploratory Analysis of Data	
3	**Supervised Learning Algorithms**	10
	Introduction to Artificial Intelligence and machine learning Regression Models: Linear regression, polynomial regression, multi-variate regression Classification Models: binary classification, Decision Tree Algorithm, Role of Entropy and Information gain in Decision Tree Algorithm, K-Nearest-Neighbor algorithm, Classification Metrics – Type I and Type II Errors and Confusion Matrix Case study: Branch/Area Specific applications – Applications of AI in Finance, Healthcare, Marketing, etc.	

RECOMMENDED READING:

Essential Reading:

1. Paul Gries, et al., Practical Programming: An Introduction to Computer Science Using Python 3, Pragmatic Bookshelf, 2/E 2014
2. Muller A.,Introduction to Machine Learning with Python, Shroff Publishers and Distributors

Suggested Reading:

1. Gaurav Leekha, Learn AI with Python, BPB Publications
2. Prateek Joshi, Artificial Intelligence with Python, Packt Publishing Limited

Evaluation Pattern :

The performance of the learner will be evaluated in two components. The first component will be a Continuous Assessment with a weightage of 50% of total marks of the course. The second component will be a Final Evaluation with a weightage of 50% of the total marks of the course. The allocation of marks for the Continuous Assessment and Semester end Examinations is as shown below:

Continuous Assessment and Evaluation (CAE) (Marks - 50)

Hands-on Practical sessions will be conducted based on the topics covered in the syllabus. Students are expected to perform the practicals based on which they will be assessed.

Continuous Assessment	Details	Marks
Component 1 (CA-1)	Practical Assignment on the Programming Concepts of Python	25 marks
Component 2 (CA-2)	Practical Assignment on supervised learning models	25 marks

Final Evaluation (Marks – 50)

At the end of the course, students are expected to prepare a case study based on the role and applications of Artificial Intelligence in different domains. The case study may be in the form of a research paper / project developed in Python for a subject-specific domain.

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Signature
HOD

Signature
Approved by Vice –Principal

Signature
Approved by Principal