

Mini Project: Artificial Intelligence

Objective:

The objective is to develop the skills required for Machine Learning Technologies with use of Python to analyze data, create beautiful visualizations, and problem solving using powerful machine learning algorithms.

Duration:

- 80 hrs.

Outline:

S.No.	Module Title	Duration		
		Theory	Lab	Total
1.	Introduction to Python Programming	8	12	20
2.	Data analysis and Exploration	5	5	10
3.	AI (Machine Learning) and its Application	10	20	30
4.	Mini Project(Implementation and Report writing)	-	-	20

Detailed Syllabus

S.No.	Module Name	Outline	Duration		Objective
			Theory	Lab	
1.	Module 1 - Introduction to Python Programming	PYTHON o Knowing Python o Installing the Environment o Getting familiar to Python IDE o Setup Setting up Anaconda o Why prefer python over others ❖ EXPRESSIONS & OPERATORS ❖ PYTHON DATA TYPES ❖ DATA FLOW CONTROL ❖ FUNCTIONS IN PYTHON	8	12	After completion of this module, the candidate will be able to : • How to install python software and IDEs. • How to use various data types like List, Tuple, and Dictionary etc. • How to use various loops and conditional statements.
2.	Module 2 - Data analysis and Exploration	Data Analysis & visualization –using numpy, panda matplotlib, scipy etc	5	5	After completion of this module students will be • Data Manipulation using Numpy, Pandas and Matplotlib. • Preprocessing of machine learning
3.	Module3 – “Machine learning” a field of AI & its Application	Introduction Classification Regression Clustering	10	20	After attending this module the participants will be able to • Implementation of various machine learning algorithms • Evaluation of various machine learning algorithm
4.	Mini Project		-	-	After completion of the project students will be • Able to apply machine learning algorithm on given data. • Evaluation and visualization of performance. • Make predictions using machine learning algorithms.