SESSION PLAN

Session name	Manipulating Data using NumPy

Learning Outcomes

The concept will introduce how to manipulate matrices using the NumPy library in Python. Matrices are fundamental representations of data for many machine learning applications. In this concept, you will learn

- Arrays in NumPy
- Creating NumPy arrays
- Indexing and Slicing NumPy arrays
- Applying NumPy hands-on

Prerequisites for the Student ● Manipulating Data using NumPy - Go through the concept and solve the tasks and assessments.	

Student Activities

- Discuss with the Mentor what you have learned.
- Overview of Manipulating Data using NumPy
    - What are Arrays?
    - Indexing and Slicing
    - Vectorization(Operations with Numpy array) & Broadcasting
- Different Ways to Create Numpy Arrays like one dimensional, two dimensional, an identity matrix.
- Perform Operations on Weather Dataset.
- Practice problems on Arrays, Indexing and Slicing, Vectorization and Broadcasting.
    - Refer the GitHub repo for problems
- Quiz on Manipulating Data using NumPy.
- Code Along
- Questions and Discussion on doubts - AMA

Next Session

- Concept - Data Wrangling with Pandas
- Key topics to be highlighted - highlight where they would need to spend more time and importance w.r.t Data Science.
    - Series and Dataframes
    - Access data in Dataframes
    - Basic operations on Dataframes
    - Advanced operations on Dataframes