greatlearning
Learning for Life

Week 2: Getting Started with Numpy and Pandas (Total video duration= 2.8 hours.You will be required to spend 25 min/day along with practice datasets and quizzes)

Learning Outcomes from Week 2

▶ Introduction to numpy package and the functionalities in it, accessing entries and modifying entries in numpy arrays and matrices, saving and loading the arrays on hard drive

▶ Introduction to pandas package, using series and dataframes, accessing and modifying dataframes in pandas, combining dataframe via merge,concat and join, saving and loading dataframes into .csv and .xls formats and exploring other basic functionalities in pandas package
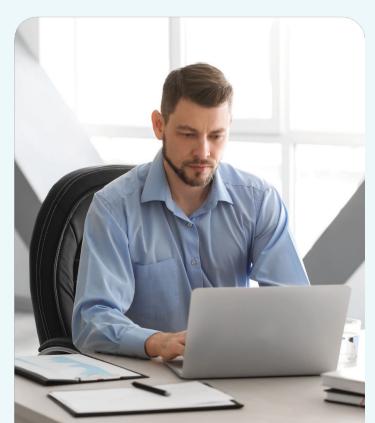
Mentor Session Duration: 2 hours		Faculty Name: Daniel Mitchell		No. of videos: 9
Video No.	**Video Name**	**Duration of the video**	**Topics Covered**	**Conceptual or Hands On**
1	NumPy Intro	33:34	Using Numpy to perform special functions like Square root, exponential log. Creating Numpy Arrays- Vectors and Matrices	Conceptual+Hands-On
2	Numpy Accessing Entries	16:48	Accessing entries to Numpy arrays and matrices both entire vector and access some specific subsets of the vector and change entries in the vector.	Conceptual+Hands-On
3	Saving & Loading NumPy Arrays	20:02	Indexing Numpy arrays with logicals and Saving and Loading Numpy arrays on hard drive.	Conceptual+Hands-On
4	Pandas - Introduction	6:13	Pandas is a package used for managing data which creates two new data types for storing data- Series and Data Frames.	Conceptual+Hands-On
5	Pandas - Series and Dataframes	14:10	How to use Series and Dataframes in pandas through hands-on example	Conceptual+Hands-On
6	Pandas - Accessing and modifying	16:45	Accessing individual column and rows in a dataframe, using logical indexing for data frames just like for numpy arrays,removing data frame's index labels and assign new names to the index.	Conceptual+Hands-On

7	Pandas - Combining Dataframes	25:35	The ways data frames are combined in pandas is similar to SQL. There are 3 ways of doing it- concat, join, merge.	Conceptual+Hands-On
8	Pandas - Functions	22:44	Few more basic functionalities in pandas like unique values in a series, counting the unique values, finding sum, mean, minimum and maximum values etc.	Conceptual+Hands-On
9	Pandas - Saving and Loading dataframes	11:57	How to save and load dataframes to CSV files and .xls file.	Conceptual+Hands-On

Additional Reading material:

▶ https://docs.scipy.org/doc/numpy/reference/

▶ https://pandas.pydata.org/

▶ https://www.kaggle.com/learn/pandas