SUMMER ANALYTICS

MODULE 02: NUMPY AND PANDAS

Hi guys!

Give yourself a pat on the back for **crossing the first milestone** in this interesting journey of analytics and data science. Now that you have your basics clear, it's time that we delve deeper into the nuances of another crucial part in data science: Numpy & Pandas, your two evergreen friends in this journey. Both these libraries are of extreme importance from your placement as well as research point of view. In fact, logic developed while studying these two libraries is used in various other languages like SQL as well.

TOPICS:

1. Numpy theory

   Numpy is one of the most widely-used Python libraries with use cases as simple as storing numbers to helping in the detection of the first gravitational waves by storing important data. You may want to have a look at Numpy's official website to explore some interesting stuff going on with Numpy!

TASK 1	Intro to Numpy	A brief introduction to Numpy to get you started
TASK 2	Coding with Numpy (**Watch till 50:20**)	Starts at **9:17** This video will give you hands-on experience coding in Numpy in Jupyter Notebooks.

2. Numpy practice

   Well after a good comprehensive lecture of Numpy it's now time we get our hands dirty and start some coding to help us know if we've been able to understand Numpy fully well.

TASK 1	Numpy notebook from the video	You might wanna review of the things learnt
TASK 2	Numpy cheat sheet	A cheat sheet to keep in handy in case you forget something. Would be great if you're able to develop your own.
TASK 3	Numpy Self-Assessment	A self check notebook on NumPy
TASK 4	Numpy Self-Assessment solutions	Solved the previous one? Check your answers here!

3. Pandas

Pandas are happy lazy animals. But Pandas in Python…? Oh boy, they are the most actively used library that you'll ever come across in your data science journey! Pandas are fiercely filled with functions to help you get a complex analysis done in seconds. Pandas Website

TASK 1	Intro to Series in Pandas	Building blocks of a DataFrame- Panda-Series
TASK 2	Intro to Pandas (1-9)	PyCon Instructor-Kevin Markham introducing us to Pandas
TASK 3	Data Analysis in Pandas (10-21)	Phew… just some more videos to go
TASK 4	Adv Data Analysis in Pandas (24-32)	The last bunch of videos in Pandas **(except 31)**
TASK 5	Pandas Cheat Sheet	That's a ton of info, keep this cheat sheet handy
TASK 6	Pandas Self Assessment	Finally, time to test yourself
TASK 7	Pandas Self Assessment- Solutions	Did you fare well in the self-check? Let's see!

4. Optional material

Well, I know the content on Pandas must have been pretty exhausting. If you feel you've still got some fuel left please have a look at this event. Will go a long way to give you a practical use case of the skills you've learnt.

TASK 1	PyCon 2019	PyCon 2019 -- Kevin Markham ftw!

5. This component is graded. Feel free to use the internet to understand the concepts better. Do these questions independently for best results.

Click here to attempt the test.