

Week 1: Getting Started with Python (Total video duration= 2 hours. You will be required to spend 25 minutes/day along with practicing datasets and quizzes)

“Python is like a Swiss army knife for the coding world.” It is a much-beloved programming language among data scientists and programmers alike. Python majorly has started being used in Data Science due to its simplicity and inherent readability. According to a study, almost 40% of the data scientists worldwide use Python for their day-to day work such as Weather Prediction, Fraud Detection, Airline Route Planning and much more.

Learning Outcomes from the Module:

After learning from this module, learners will be able to understand:

- ▶ Why Python, advantages and its disadvantages, IDEs
- ▶ Anaconda installation, different shortcuts in Jupyter Notebook
- ▶ Introduction to Variables and its Types
- ▶ Looping statements and conditional statements
- ▶ User defined functions



Mentor Session Duration:
2 hours

Faculty Name:
Daniel Mitchell

No. of videos:
8

Video No.	Video Name	Duration of the video	Topics Covered	Conceptual or Hands On
1	Why Python, Python vs R, Python IDEs	11:26	Why to use Python, Advantages and Disadvantages of using Python, Comparing Python to R and different IDEs available to use to code in Python	Conceptual
2	Anaconda installation, Intro to Jupyter Notebook	15:24	Steps to install Jupyter Notebook and run the same on your computer	Conceptual + Hands On
3	Jupyter Notebook Shortcuts	15:22	Important shortcuts to remember while working on Jupyter Notebook	Conceptual + Hands On
4	Intro to variables	5:34	Using # to add comments in a code and inspecting the type of variable using type()	Conceptual + Hands On
5	Collections of variables _list, tuple, set, dictionary	23:32	Understanding main collections of variables- List, Tuple, Set, Dictionary and how to use them	Conceptual + Hands On
6	Looping Statements (for, while)	21:49	Understanding flow controls- loops and conditionals. Main types of loops used are for and while. The insides of a for and a while loop is determined by tabs.	Conceptual + Hands On
7	Conditional Statements (if, elif, else)	06:23	There are 3 types of conditional statements- if, else and elif. Understanding how to use these through examples.	Conceptual + Hands On
8	User defined functions, lambda functions	20:14	You can define your own functions and then call them when needed, to perform same computation in different scenarios.	Conceptual + Hands On

Few textbooks that you can refer to:

1

Dr. R Nageswara Rao

Core Python Programming, Second Edition,
Dreamtech Press, 2019

2

Kenneth A. Lambert

The Fundamentals of Python:
First Programs, Cengage Learning, 2011

3

Allen B Downey

Think Python, O'Reilly, 2012

