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Course Content

Course Outline

Overview

In this present highly competitive and global environment, any professional and progressive organization that aims to survive, grow significantly in the marketplace and then sustain the growth must unshackle itself from ad-hoc ways of looking at data. Instead, it should use analytic tools for converting data into information for effective decisions and strategy formulation.

An 'end-to-end' Analytics problem involves multiple complex steps. One needs to define the scope of the problem, prepare the data, identify the appropriate tools and techniques and finally present the 'solution' in a way that is actionable. This art of modeling a business problem, then finding the solution using analytics, and finally implementing it successfully are some key tenets of how learning is delivered in the DSBA program.

This course aims to set a foundation for that journey.

Course Objectives

After completing this course, you will be able to:

- Get a good appreciation of what Data Science means and what are some key aspects of it
- Understand the importance of data identification, gathering, and processing
- Understand why we need the tools and techniques that we are using
- Appreciate the importance of programming

Topics Covered

Module	Name of the topic

Setting up Python	• Getting Started with Python • Download and Installation of Anaconda Navigator • Working with Jupyter Notebook • Introduction to Google Colab
Introduction to Python	• Introduction to Variables • Datatypes in Python • Operators in Python
Data Structures in Python	• Introduction to List, Tuple, Dictionary, and Set • Conditional Statements • Looping Constructs
Descriptive Statistics	• Basics of Statistics • Measures of Central Tendency • Measures of Dispersion • Covariance and Correlation Coefficient • Exploratory Data Analysis (EDA)

Learning Material

Module no.	Module	No. of Videos	Total Duration	No. of Test Your Understan
1	Setting up Python	5	~0.5 hours	5
2	Introduction to Python	13	~1.5 hours	13
3	Data Structures in Python	16	~1.5 hours	16
4	Descriptive Statistics	10	~1.25 hours	10

Hands-on Quiz

A hands-on quiz is to be submitted at the end of the module Data Structures in Python. The quiz contains questions from the concepts covered in the video content.

Happy Learning!

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