Python Programming for Marketing Analytics

Introduction

This module is an introductory course for Python programming and data analytics. It covers basic Python programming techniques and preliminary data analysis, with a great emphasis on addressing practical business problems and real datasets. As a basic level course, there is no prerequisite for students. From this module, students will learn the basic Python programming and modeling techniques through extensive exercises and case studies. They will apply these techniques in real-world datasets for solving practical marketing problems.

Course Objectives

A. Describe Python data acquisition and analysis techniques for marketing.
B. Analyze Python data using a dataset.
C. Identify three Python libraries and describe their uses.
D. Read data using Python's Pandas package and their utilization in marketing.
E. Develop an intuition for the machine learning workflow and Python tooling.
F. Build familiarity with common software tooling and methodologies for implementing a machine learning project.

Course Learning Outcomes

On successful completion of the course, students will be able to:

A. Acquire an understanding of Predictive Modeling
B. Describe Python data acquisition and analysis techniques.
C. Analyze Python data using a dataset.
D. Data Visualization (DataViz) and Model Selection for marketing using Python

Contents

A. Python and Jupyter Overview
B. Importing, Selecting, Filtering and Summarizing Data
C. Working with Columns
D. Joining, Exporting and Visualizing Data
E. Working with Data using Pandas (Conditions, Iterations, Functions)
F. Applying Functions to Pandas Dataframes
G. Python Data Science Ecosystem

H. Modeling with Scikit-learn

I. Git and Version Control

J. EDA and first scikit-learn model

K. ML Lifecycle Management

Recommended Book

Python for Marketing Research and Analytics 1st ed. 2020 Edition by Jason S. Schwarz , Chris Chapman and Elea McDonnell Feit