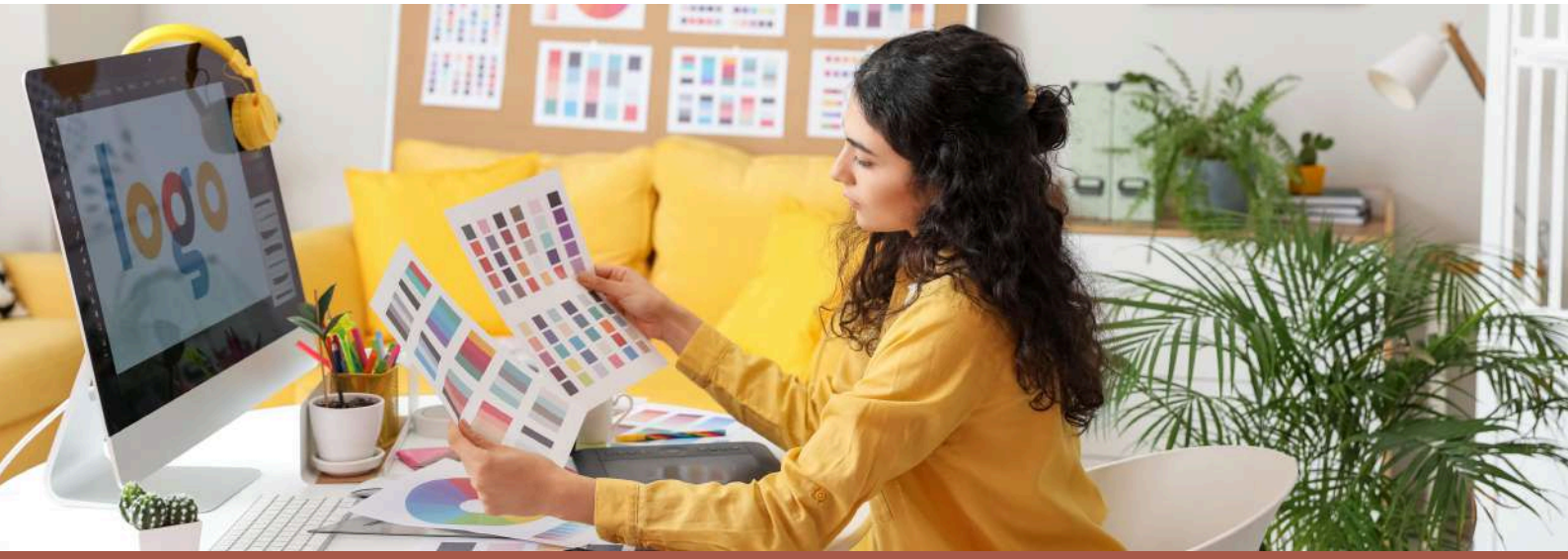
INNOVA TRAINING INSTITUTE

BROCHURE



Data Science with Python Powered Exploratory Data Analysis

OVERVIEW

Python is an easy to learn, readable, dynamic, flexible, fast, and powerful tool. In this 4 Week course, you will learn about the basics of Python programming, computation using the NumPy library, data manipulation using the pandas library, and visualizing the data using the seaborn library.

The objective is to give learners a holistic overview of solving a business problem through analytics and to set up the foundations of the skills required to work with data, delivered via foundations of Python. The concepts discussed in this course will be useful throughout the program in subsequent courses.

COURSE OBJECTIVES

After completing this course, you will be able to:

- Solve business problems & deliver actionable insights and business recommendations by performing exploratory data analysis
- Read, explore, manipulate, and visualize data to tell stories using some of the most widely used Python packages, including NumPy, pandas, and seaborn

TOPICS COVERED:

WEEK	MODULE	NAME OF THE TOPIC
1	Introduction to Python	• Introduction to Google Colab • Variables • Data Structures • Conditional Statements • Looping Statements • Functions
2	Python for Data Science	• NumPy arrays and functions • Accessing and modifying NumPy arrays • Saving and loading NumPy arrays • Pandas Series (Creating, Accessing, and • Modifying Series) • Pandas DataFrames • (Creating, Accessing, Modifying, • and Combining DataFrames) • Pandas Functions • Saving and loading datasets using • Pandas

WEEK	MODULE	NAME OF THE TOPIC
3	Python for Visualization	• Data Loading and Overview • Histogram and Bar Graph • Boxplot and Violin Plot • Line Plot • Scatterplot, Pairplot, and Heatmap • Jointplot and Lmplot • Catplot, Strip Plot, Swarm Plot • Plotly • Customizing Plots
4	Exploratory Data Analysis (Deep Dive)	• Sanity Checks • Univariate Analysis • Bivariate Analysis • Missing value treatment • Outlier Treatment

TOPICS COVERED:

WEEK	MODULE	No. of Videos	Total Duration	No. of Test your Understanding Quizzes	No. of Weekly Graded Quizzes	No. of Practice Quizzes
1	Introduction to Python	15	2 Hours	15	1	5
2	Python for Data Science	18	2 Hours	18	1	2
3	Python for Visualization	17	2 Hours	17	1	1
4	Exploratory Data Analysis (Deep Dive)	8	2 Hours	8	1	1

PROJECT

A graded project is to be submitted by the learners at the end of the course. The project is about an Food aggregator company which collects the data of orders that are placed on their smartphone app 'Foodhub'. They want to analyze the data to get a fair idea about the demand of different restaurants which will help them in enhancing their customer experience. The objective here is to perform the data analysis to find answers to these questions that will help the company to improve the business.

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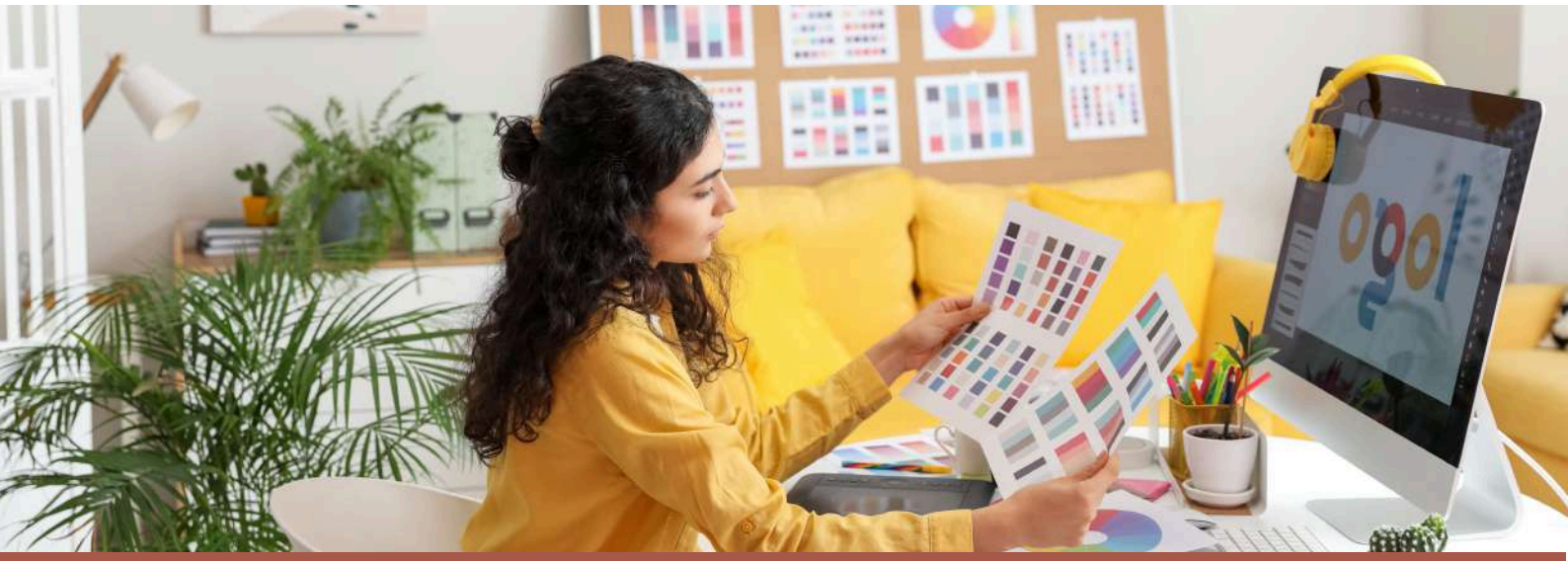

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