

# Python Champion

## Enhance Your Skills (Class 8 and above)

An advanced program where students use Python to explore datasets, analyze information, and create visual stories from data.

### What will you learn

#### **Session 1: Python Basics & Google Colab**

Learn how to write and run Python programs in Google Colab while understanding core concepts like variables, data types, and input/output.

#### **Session 2: Working with Data Structures**

Explore how lists and dictionaries help organize, store, and manage different types of data efficiently.

#### **Session 3: Control Flow**

Understand how conditional statements and loops control the logic and decision-making within a Python program.

#### **Session 4: Functions**

Learn how to create reusable functions to simplify code, perform tasks efficiently, and build organized programs.

#### **Session 5: Introduction to Pandas**

Discover how to load datasets and explore structured data using powerful Pandas DataFrames.

#### **Session 6: Data Manipulation**

Practice filtering, cleaning, and transforming datasets to prepare data for meaningful analysis.

#### **Session 7: Data Visualization**

Create impactful charts and graphs using Matplotlib and Seaborn to visually represent data insights.

#### **Session 8: Statistics for Data Analysis**

Learn fundamental statistical concepts like mean, median, and mode to interpret patterns and trends in data.