

## Classroom Assignment <3>: Handling Missing Data in Pandas

### Learning Objective:

Learn how to detect and handle **missing values** in CSV data using Pandas functions.

### Expected Completion Time:

Best Case: 20 minutes

Average Case: 30 minutes

### Assignment Details:

1. Create a CSV file named **test\_results\_missing.csv** with missing values:

TestCase	Module	Status	Duration	Defects
TC1	Login	Passed	12	0
TC2	Login	Failed	NaN	2
TC3	Payment	Passed	20	NaN
TC4	Payment	Failed	18	3
TC5	Reports	NaN	25	0

2. Write a Python script **pandas\_missing\_data.py** that:
  - Reads the CSV into a DataFrame.
  - Use `.isnull().sum()` to count missing values in each column.
  - Use `.fillna(value)` to:
    - Replace missing `Duration` with the mean duration.
    - Replace missing `Status` with "Unknown".
  - Use `.dropna()` to drop any row that still contains missing values.
  - Print the cleaned DataFrame.

### Hints to Solve:

- Use `pd.read_csv("test_results_missing.csv")`.
- Use `.fillna(df['Duration'].mean())`.
- Use `.dropna(inplace=True)` to remove rows.

### Expected Outcome:

- Detect missing values.
- Handle missing data with `fillna` and `dropna`.
- Clean datasets to prepare for further analysis.