



## **Assignment 1 – Working with Data in Excel**

This assignment is based on the Workplace Productivity Dataset. The goal is to apply the skills learned during the first Excel lab session to organize data, compute descriptive statistics, and create exploratory visualizations.

### **Dataset Information**

The dataset contains 100 records of employees with the following variables:

- Employee\_ID: Unique identifier
- Department: Categorical (Sales, HR, IT, Finance, Marketing)
- Gender: Categorical (Male/Female)
- Education\_Level: Categorical (High School, Bachelor, Master, PhD)
- Years\_of\_Experience: Numerical
- Training\_Hours: Numerical
- Performance\_Score: Numerical (0–100)
- Remote\_Work: Categorical (Yes/No)

### **Objectives**

By completing this assignment, you will demonstrate your ability to:

- Import and organize datasets in Excel
- Identify variable types (categorical vs numerical)
- Compute descriptive statistics
- Create meaningful visualizations
- Interpret results in simple insights

### **Tasks**

#### **1. Data Organization**

- Import the dataset into Excel.
- Create a new sheet called Variable Types and classify all variables as categorical or numerical.

## 2. Descriptive Statistics

For Years\_of\_Experience, Training\_Hours, and Performance\_Score, compute:

- Mean, Median, Mode
- Minimum, Maximum

## 3. Categorical Summaries

- Count how many employees are Male vs Female.
- Count how many employees work remotely vs on-site.
- Identify which department has the highest number of employees.

## 4. Exploratory Analysis with Charts

Build at least 2 charts:

- A bar chart showing employee count by department
- A column chart comparing average performance score by education level

## 5. Insights

- Write 3 short bullet-point insights based on your findings.

## Submission Guidelines

Submit a single Excel file with the following sheets:

- Sheet 1: Cleaned dataset
- Sheet 2: Variable classification table
- Sheet 3: Descriptive statistics
- Sheet 4: categorical summaries
- Sheet 5: Charts
- Sheet 6: Insights (typed in cells)

**Submission Deadline:** Sunday 14<sup>th</sup> September 2025 11:59pm GMT.

**NOTE:** Please save your assignment with your full name (e.g., *John Doe Assignment 1*) and send it to the following email addresses:

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