# **High Impact Skills Development Program** **AI & Data Science**

**Scenario: Analyzing Sales Data with Pivot Tables**

**Scenario Overview:**

Imagine you are a sales analyst working for a retail company that sells a wide range of products across multiple regions. The company’s management wants to gain insights into sales performance, focusing on key metrics such as total sales by product, region, and time period. You have been given a large dataset, Detailed-Sales.csv, which contains sales records for the past year. Your task is to use Excel’s Pivot Tables to analyze the data and create a meaningful report that highlights important trends and figures.

**Objective:** Your goal is to provide management with a clear and concise summary of sales data, including:

* Total sales by product.
* Sales performance across different regions.
* Sales trends over different time periods (e.g., monthly, quarterly).
* Identifying top-performing products and regions.

**Steps to Achieve the Objective:**

1. **Open a New Workbook:**
   * Start Excel and open a new blank workbook where you will import and analyze the data.
2. **Import Data from Detailed-Sales.csv:**
   * Go to the Data tab in Excel.
   * Click on From Text/CSV to import the Detailed-Sales.csv file.
   * Preview the data to ensure it’s correctly formatted, then load it into the workbook.
3. **Select the Data Range:**
   * Highlight the entire range of data in your worksheet, ensuring all relevant columns and rows are selected.
4. **Insert a Pivot Table:**
   * Go to the Insert tab and select PivotTable.
   * Choose to place the Pivot Table in a new worksheet for better organization.
5. **Build the Pivot Table:**
   * From the PivotTable Fields List on the right, drag and drop the following fields:
     + Product Name to the Rows area.
     + Region to the Columns area.
     + Sales Amount to the Values area.
   * This will generate a Pivot Table that shows total sales for each product across different regions.
6. **Generate a Bar Chart:**
   * Highlight the data in your Pivot Table that shows sales by product.
   * Go to the Insert tab and choose Bar Chart to visually represent the sales figures.
   * This bar chart will provide a quick visual comparison of product sales.
7. **Explore Filtering, Sorting, and Creating Calculated Fields:**
   * Use the filtering options in the Pivot Table to focus on specific products, regions, or time periods.
   * Sort the data to identify top-selling products or regions.
   * Create calculated fields to derive additional metrics, such as the average sales per product or percentage contribution of each region to total sales.

**Outcome:**

By following these steps, you will have a comprehensive report that management can use to make informed decisions. The Pivot Table will allow you to view the sales data from various angles, making it easier to identify trends, outliers, and key performance metrics. The accompanying bar chart will offer a clear visual summary of product sales, enhancing the overall analysis.

This scenario showcases the power of Pivot Tables in summarizing and analyzing large datasets efficiently, providing valuable insights in a user-friendly format.