DATA ANALYST INTERNSHIP

Employee Data Analysis Assessment:

1. **Can you create a pivot table to summarize the total number of employees in each department?**

A3 | Department

	A	B	C	D
1				
2				
3	**Department**	**Count of Employee ID**		
4	Admin Offices	80		
5	Executive Office	24		
6	IT/IS	430		
7	Production	2020		
8	Sales	331		
9	Software Engineering	115		
10	(blank)			
11	**Grand Total**	**3000**		
12				
13				
14				

2. **Apply conditional formatting to highlight employees with a "Performance Score" below 3 in red.**

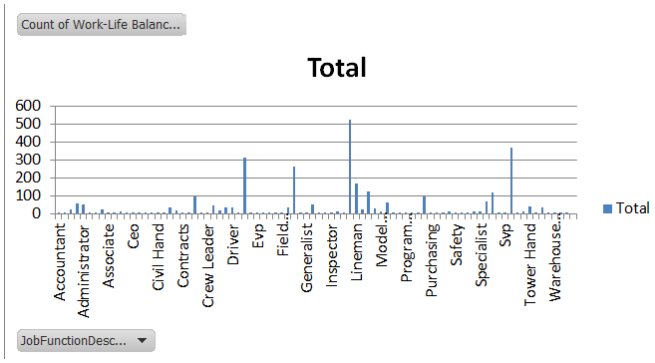
   Home > Conditional formatting > Select the column performance score less than 3

   Ans : 2548 employees

3. **Calculate the average "Satisfaction Score" for male and female employees separately using a pivot table.**

Row Labels	Average of Satisfaction Score
Female	3.019648397
Male	3.075728155
Other	2.969092722
(blank)	
Grand Total	**3.022**

4. **Create a chart to visualize the distribution of "Work-Life Balance Score" for different job functions.**



5. **Filter the data to display only terminated employees and find out the most common "Termination Type."**

Department	Count of Employee ID
Involuntary	388
Resignation	380
Retirement	377
Unk	1467
Voluntary	388
(blank)	
Grand Total	**3000**

The most common Termination type is *UNK*.

6. **Calculate the average "Engagement Score" for each department using a pivot table.**

Row Labels	Average of Engagement Score
Admin Offices	3
Executive Office	2.875
IT/IS	2.934883721
Production	2.95049505
Sales	2.876132931
Software Engineering	2.92173913
(blank)	
Grand Total	**2.939666667**

7. **Can you identify the department with the highest average "Employee Rating?"**

Row Labels	Average of Current Employee Rating
Admin Offices	3.025
Executive Office	2.791666667
IT/IS	2.969767442
Production	2.982178218
Sales	2.909365559
Software Engineering	2.904347826
(blank)	
Grand Total	**2.969**

The highest average of Employee Rating is *Production*.

8. **Create a scatter plot to explore the relationship between "Training Duration (Days)" and "Training Cost."**

9. **Build a pivot table that shows the count of employees by "RaceDesc" and "GenderCode."**

Row Labels	Count of Employee ID
Asian	**629**
Female	346
Male	283
Black	**618**
Female	346
Male	272
Hispanic	**572**
Female	325
Male	247
Other	**582**
Female	318
Male	264
White	**599**
Female	347
Male	252
(blank)	
(blank)	
Grand Total	**3000**

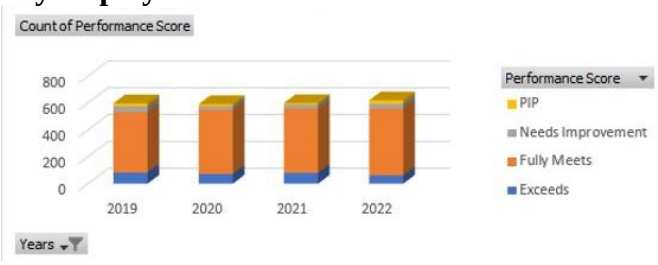
10. **Use INDEX and MATCH functions to find the "Training Program Name" for an employee with a specific ID.**

Employee ID	Training Program Nam
1030	Communication Skills
1173	Customer Service
2909	Technical Skills

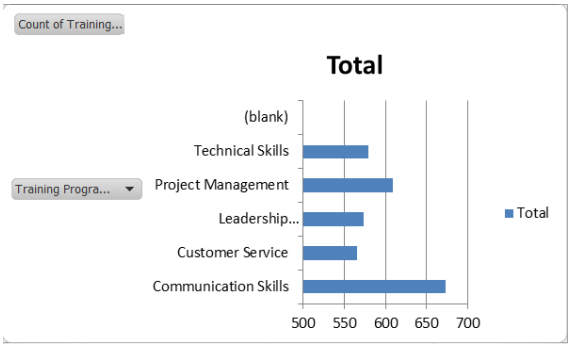
11. **Create a multi-level pivot table to analyze the "Performance Score" by "BusinessUnit" and "JobFunctionDescription."**

Business unit	Count of Performance Score	Count of JobFunctionDescription
BPC	303	303
CCDR	300	300
EW	302	302
MSC	296	296
NEL	304	304
PL	301	301
PYZ	299	299
SVG	304	304
TNS	297	297
WBL	294	294
(blank)		
Grand Total	**3000**	**3000**

12. **Design a dynamic chart that allows users to select and visualize the performance of any employee over time.**



13. **Calculate the total training cost for each "Training Program Name" and display it in a bar chart.**



14. **Apply advanced conditional formatting to highlight the top 10% and bottom 10% of employees based on "Current Employee Rating."**

Z
Current Employee Rating
4
3
4
2
3
3
4
2
3
5
5
3

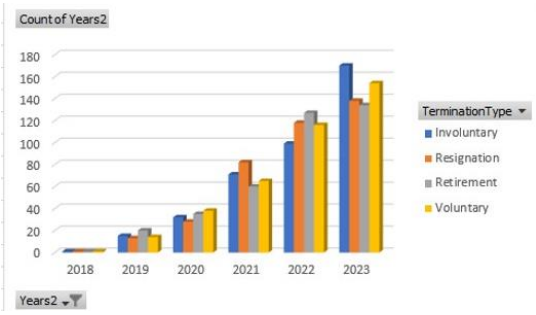
15. **Use a calculated field in a pivot table to determine the average "Engagement Score" per year.**

Row Labels	Average of Engagement Score
01-01-1900	3.021276596
02-01-1900	2.689655172
03-01-1900	2.96875
04-01-1900	2.990291262
05-01-1900	2.962264151
06-01-1900	2.883495146
07-01-1900	2.821428571
08-01-1900	3.02173913
09-01-1900	2.885714286
10-01-1900	2.946808511
11-01-1900	3.09375
12-01-1900	2.918367347
13-01-1900	3.07
14-01-1900	3
15-01-1900	2.804597701
16-01-1900	3
17-01-1900	2.797752809
18-01-1900	3.09375
19-01-1900	2.835051546
20-01-1900	3.322580645
21-01-1900	3.028846154
22-01-1900	3.013157895
23-01-1900	2.853658537
24-01-1900	2.886597938
25-01-1900	2.72815534
26-01-1900	2.93258427
27-01-1900	2.905263158
28-01-1900	2.841666667
29-01-1900	3.090909091
30-01-1900	2.943181818
31-01-1900	2.828947368
(blank)	
Grand Total	**2.939666667**

16. **Can you build a macro that automates the process of updating and refreshing all pivot tables in the workbook?**

- Press Alt + F11 to open the Visual Basic for Applications (VBA) editor.
- In the editor, click Insert in the menu and then select Module to add a new module.
- Copy and paste the provided VBA code into the module.
- Close the VBA editor.
- Now, we can run the macro:
- Press Alt + F8 to open the "Macro" dialog box.
- Select "RefreshAllPivotTables" from the list.
- Click "Run."

17. **Create a histogram to understand the distribution of "ExitDate" for terminated employees.**



18. **Utilize the SUMPRODUCT function to calculate the total training cost for employees in a specific location.**

Location	Average of Training Cost
Aaronborough	841.22
Aaronburgh	633.96
Aaronstad	939.02
Abbottton	609.01
Acevedoshire	443.55
Adamborough	444.22
Adammouth	624.385
Adamsberg	962.45
Adamsmouth	183.67
Aguirreland	881.71
Alexanderberg	494.29
Alexanderchester	346.93
Alexandraview	450.64
Alexandriachester	778.25
Alexishaven	127.93
Alfredmouth	328.74
Aliciaburgh	966.19
Aliciahaven	373.87
Allenborough	115.06
Allenhaven	643.63
Allenside	278.33
Allentown	444.4
Allisonfort	840.46
Allisonport	252.53
Allisonton	331.66
Alvaradomouth	978.55
Alvarezland	839.12
Alvarezshire	876.73
Alyssabury	732.02

19. **Develop a dashboard that provides an overview of key HR metrics, including headcount, performance, and training costs, using charts and pivot tables.**