EMPLOYEE ANALYSIS

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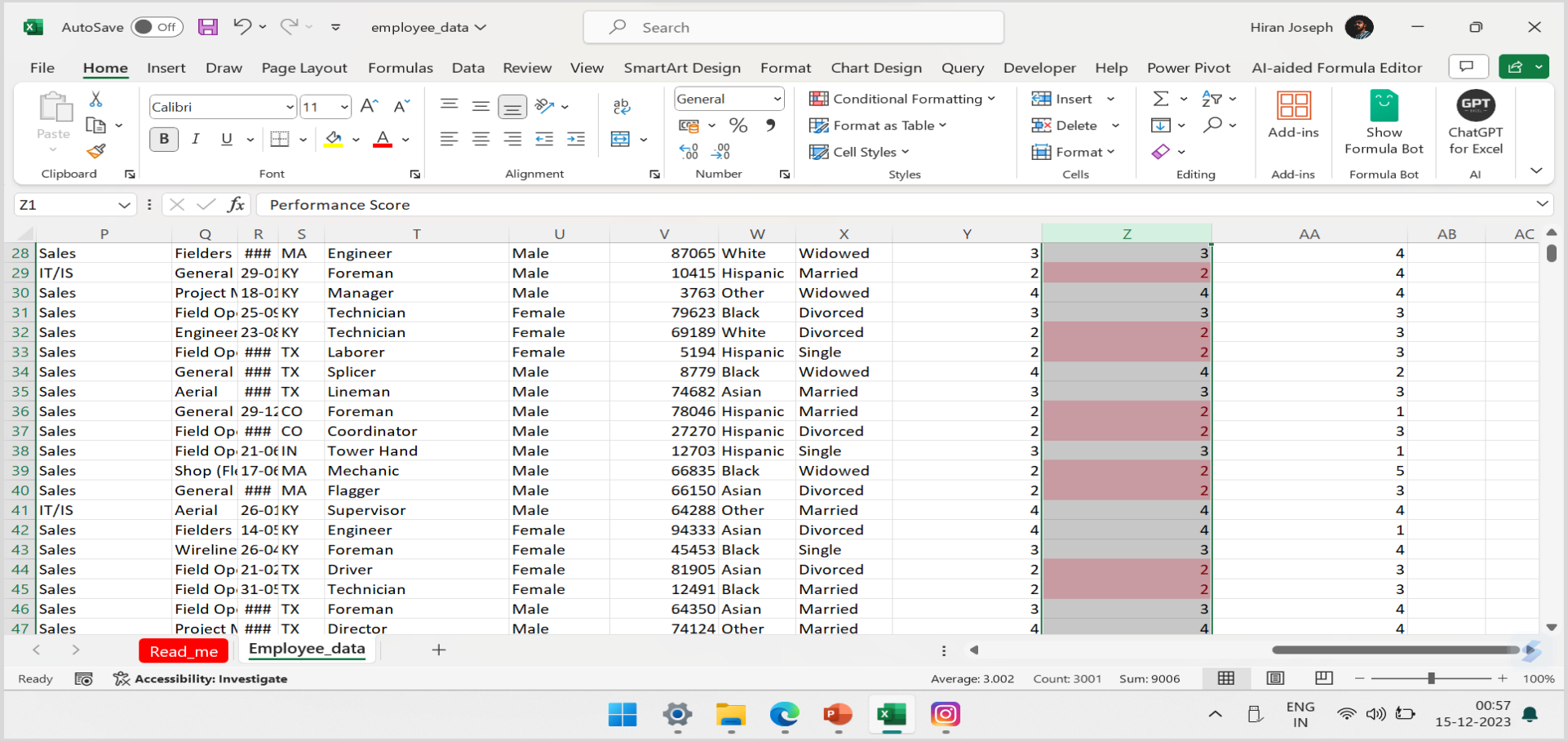
PSYLIQ

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

total number of employees in each department	
Department	Count of Employee ID
Admin Offices	80
Executive Office	24
IT/IS	430
Production	2020
Sales	331
Software Engineering	115

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

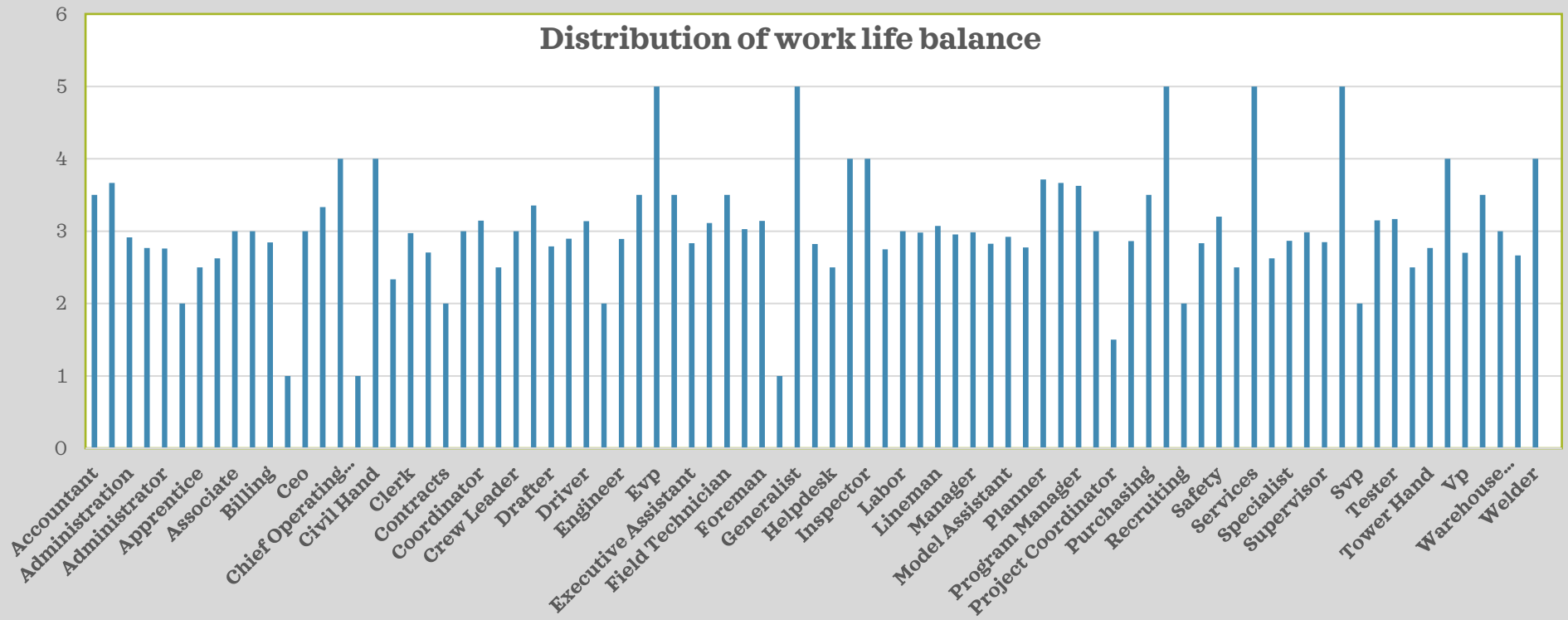


	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
28	Sales	Fielders	###	MA	Engineer	Male	87065	White	Widowed	3	3	4		
29	IT/IS	General	29-01	KY	Foreman	Male	10415	Hispanic	Married	2	2	4		
30	Sales	Project M	18-01	KY	Manager	Male	3763	Other	Widowed	4	4	4		
31	Sales	Field Op	25-05	KY	Technician	Female	79623	Black	Divorced	3	3	3		
32	Sales	Engineer	23-08	KY	Technician	Female	69189	White	Divorced	2	2	3		
33	Sales	Field Op	###	TX	Laborer	Female	5194	Hispanic	Single	2	2	3		
34	Sales	General	###	TX	Splicer	Male	8779	Black	Widowed	4	4	2		
35	Sales	Aerial	###	TX	Lineman	Male	74682	Asian	Married	3	3	3		
36	Sales	General	29-11	CO	Foreman	Male	78046	Hispanic	Married	2	2	1		
37	Sales	Field Op	###	CO	Coordinator	Male	27270	Hispanic	Divorced	2	2	3		
38	Sales	Field Op	21-06	IN	Tower Hand	Male	12703	Hispanic	Single	3	3	1		
39	Sales	Shop (Fl	17-06	MA	Mechanic	Male	66835	Black	Widowed	2	2	5		
40	Sales	General	###	MA	Flagger	Male	66150	Asian	Divorced	2	2	3		
41	IT/IS	Aerial	26-01	KY	Supervisor	Male	64288	Other	Married	4	4	4		
42	Sales	Fielders	14-05	KY	Engineer	Female	94333	Asian	Divorced	4	4	1		
43	Sales	Wireline	26-04	KY	Foreman	Female	45453	Black	Single	3	3	4		
44	Sales	Field Op	21-02	TX	Driver	Female	81905	Asian	Divorced	2	2	3		
45	Sales	Field Op	31-05	TX	Technician	Female	12491	Black	Married	2	2	3		
46	Sales	Field Op	###	TX	Foreman	Male	64350	Asian	Married	3	3	4		
47	Sales	Project M	###	TX	Director	Male	74124	Other	Married	4	4	4		

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

Row Labels	Average of Satisfaction Score
Female	3.020214031
Male	3.024279211
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."

Row Labels	Count of Employee ID
Terminated for Cause	**66**
Involuntary	21
Resignation	22
Retirement	10
Voluntary	13
Voluntarily Terminated	**321**
Involuntary	86
Resignation	74
Retirement	76
Voluntary	85
Grand Total	**387**

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

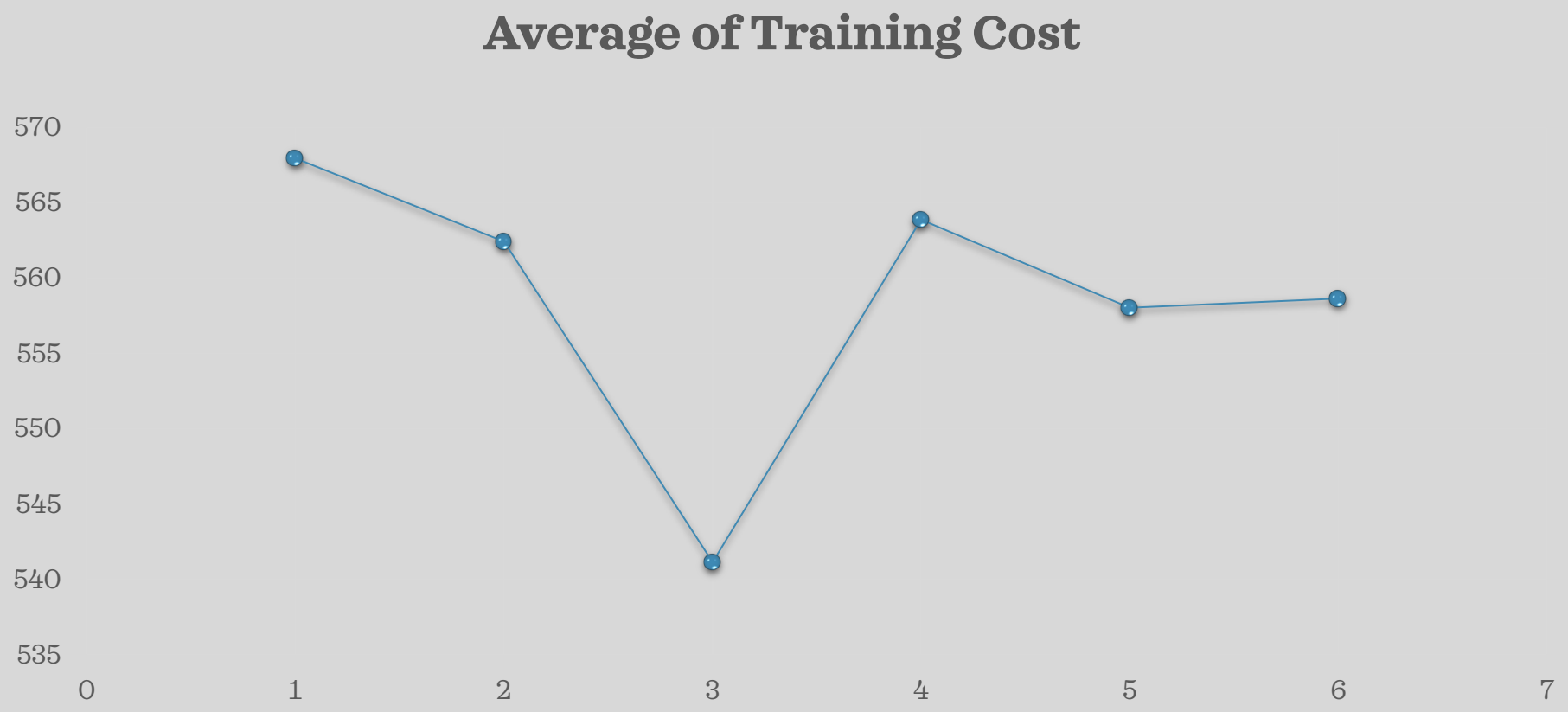
Department	Average of Engagement Score
Admin Offices	3
Executive Office	2.875
IT/IS	2.934883721
Production	2.95049505
Sales	2.876132931
Software Engineering	2.92173913

7. Use VLOOKUP to find the supervisor's email address for a specific employee.

8. 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

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



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

Row Labels	Female	Male	Grand Total
Asian	346	283	**629**
Black	346	272	**618**
Hispanic	325	247	**572**
Other	318	264	**582**
White	347	252	**599**

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

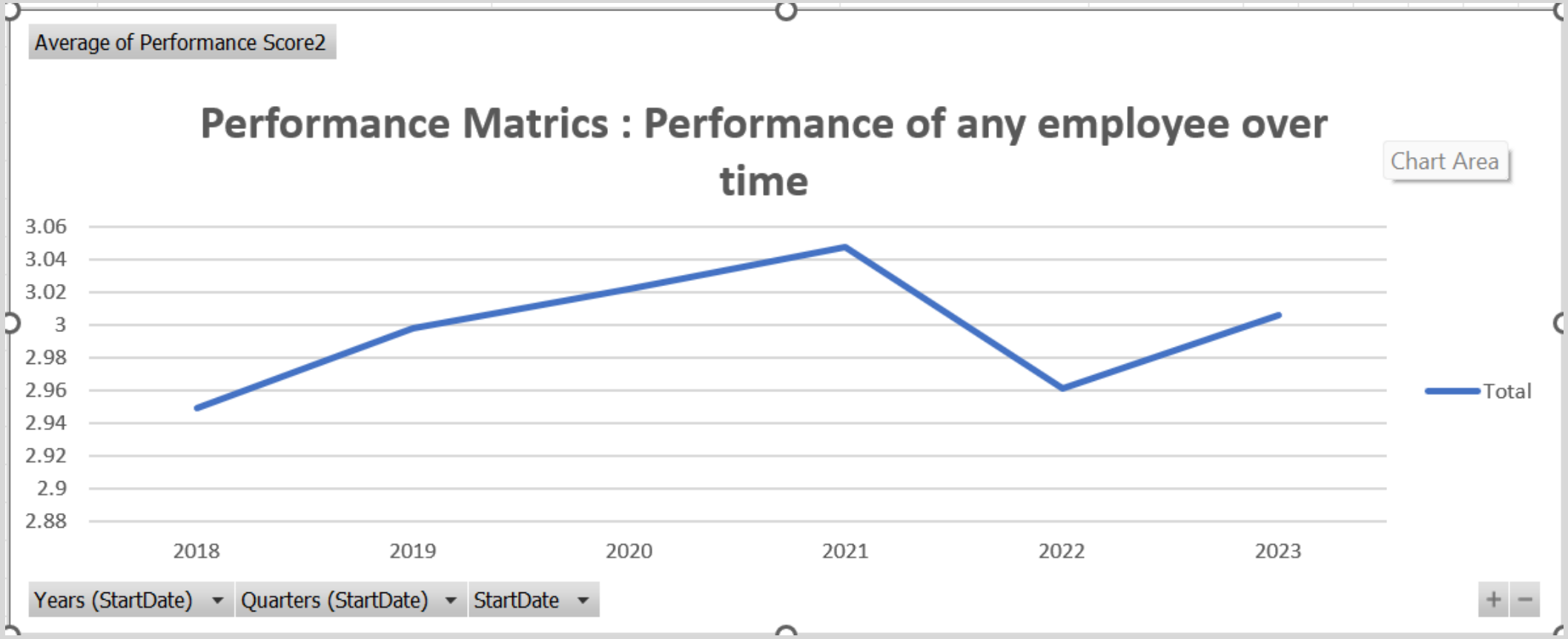
Employee ID	Training Date	Training Program	Training Type	Training Outcom	Location	Trainer	Training Dura	Training Cost
1001	21-Sep-22	Customer Service	Internal	Failed	Port Greg	Amanda Daniels	4	511
1002	19-Jul-23	Leadership Devel	Internal	Failed	Brandonview	Brittany Chambers	2	582
1003	24-Feb-23	Technical Skills	Internal	Incomplete	Port Briannahaven	Mark Roberson	4	777
1004	12-Jan-23	Customer Service	Internal	Completed	Knightborough	Richard Fisher	2	824
1005	12-May-23	Communication S	External	Passed	Bruceshire	Heather Shaffer	4	146
1006	08-May-23	Project Managem	Internal	Failed	Erinfort	Michael Duke	2	838

```
INDEX([training_and_development_data1.xlsx]training_and_development_data!$A$1:$I$3001,
MATCH($A$124,[training_and_development_data1.xlsx]training_and_development_data!$A$1:
$A$3001,0),3)
```

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

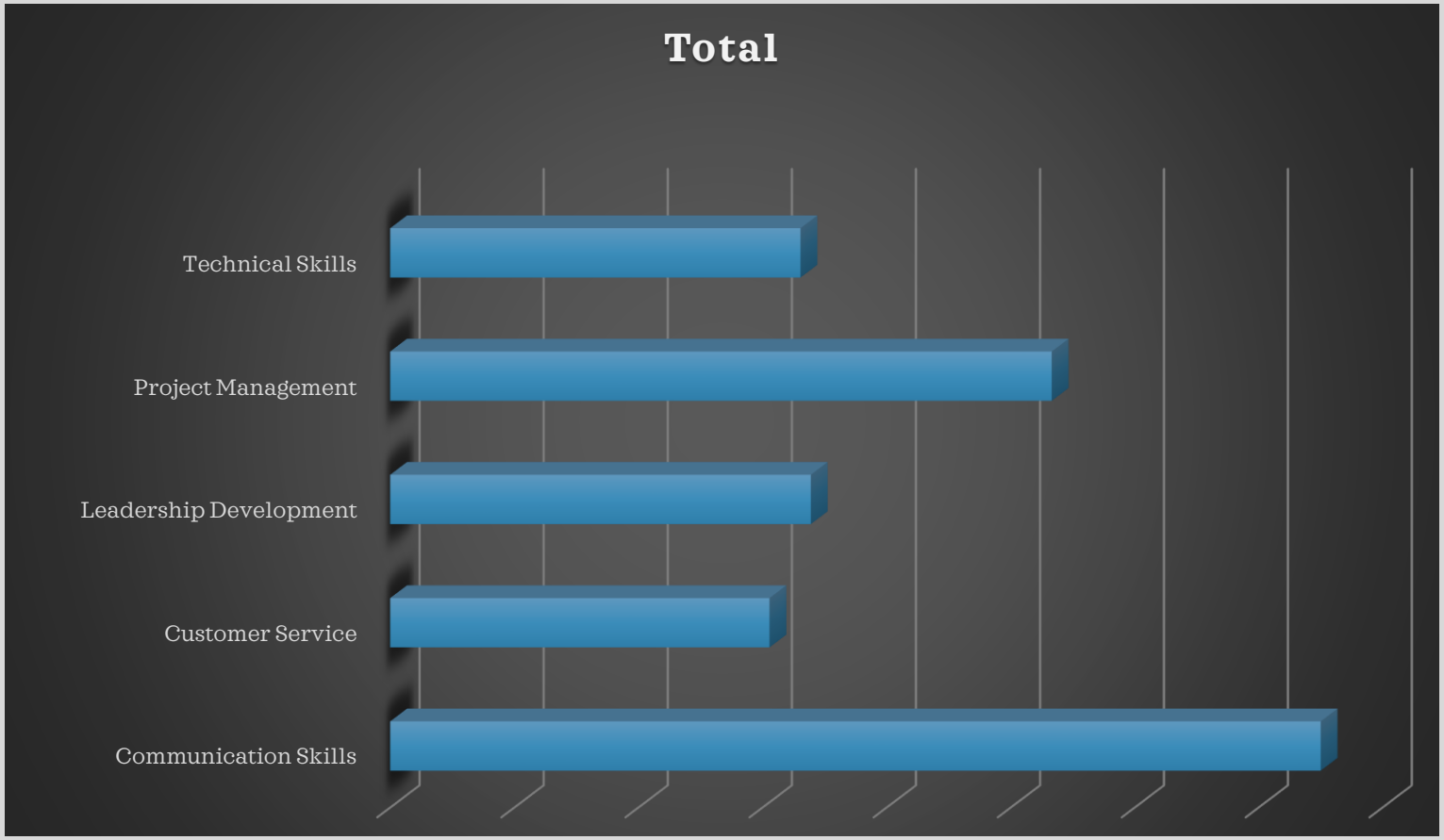
Row Labels	Count of Performance Score
⊞ BPC	303
⊞ CCDR	300
⊞ EW	302
⊞ MSC	296
⊞ NEL	304
⊞ PL	301
⊞ PYZ	299
⊞ SVG	304
⊞ TNS	297
⊞ WBL	294
Grand Total	3000

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

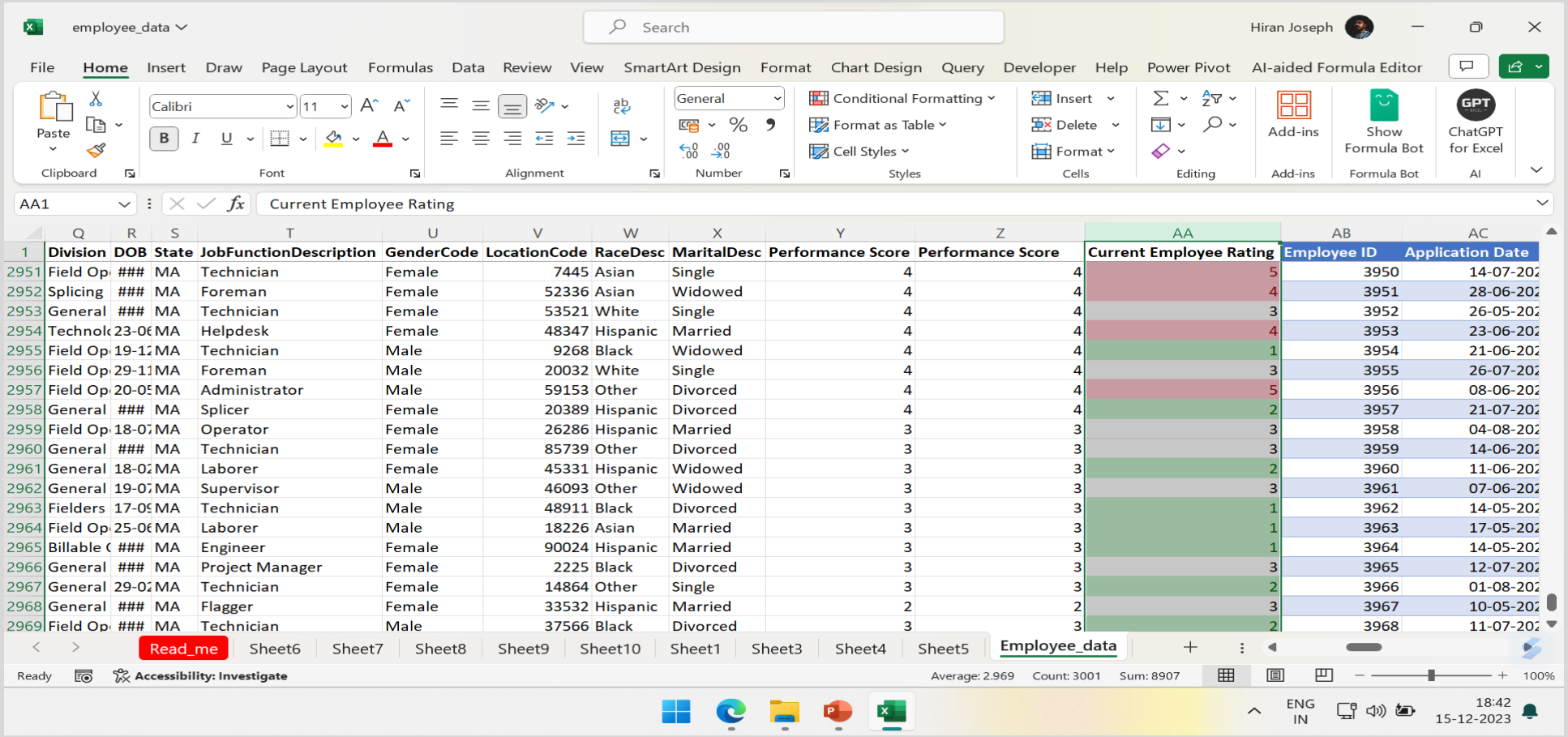


14. Calculate the total training cost for each "Training Program Name" and display it in a bar chart.

Row Labels	Sum of Training Cost
Communication Skills	365023.24
Customer Service	320575.04
Leadership Development	323902.03
Project Management	343313.17
Technical Skills	323072.61
Grand Total	**1675886.09**



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

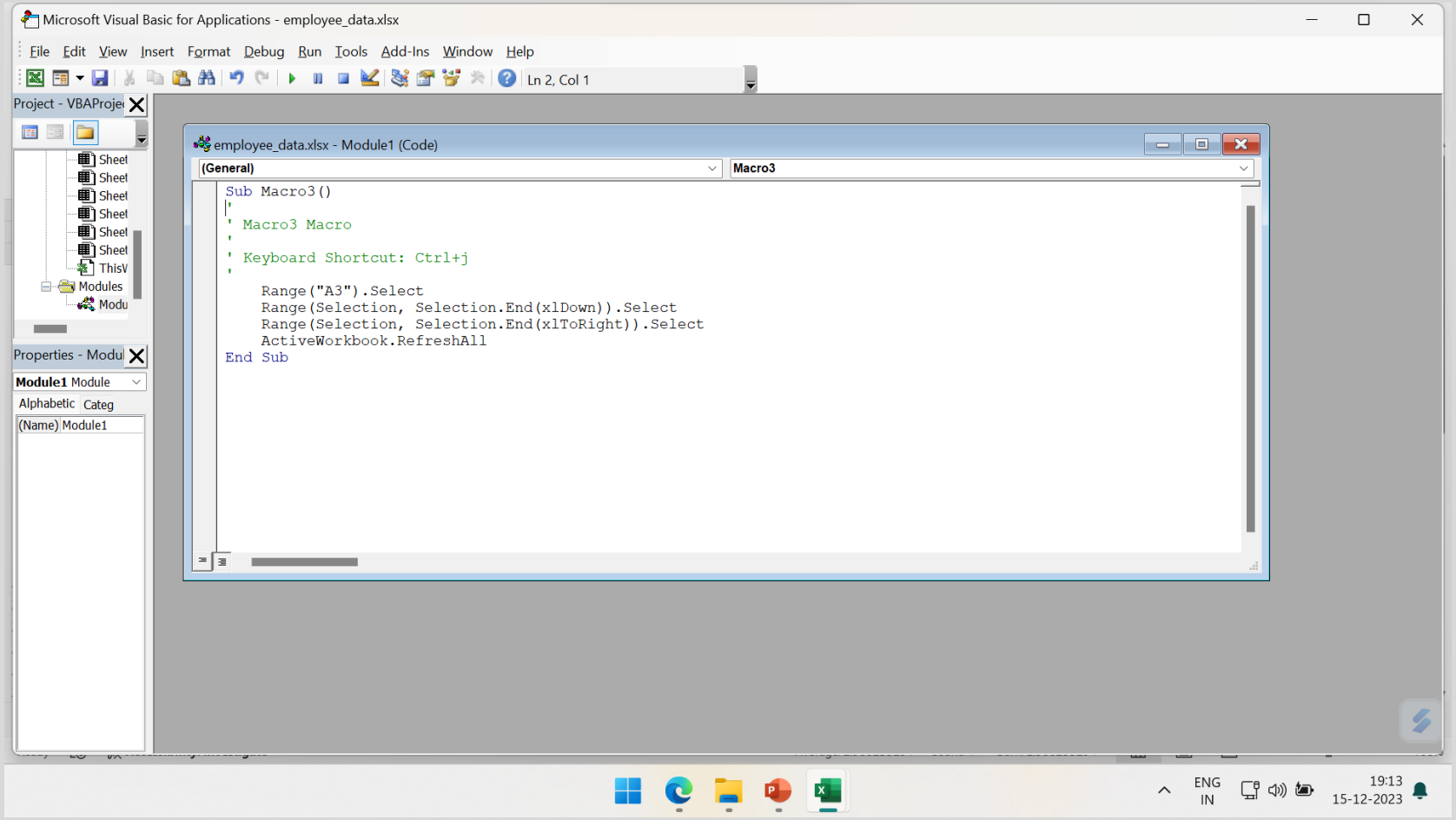


	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
1	Division	DOB	State	JobFunctionDescription	GenderCode	LocationCode	RaceDesc	MaritalDesc	Performance Score	Performance Score	Current Employee Rating	Employee ID	Application Date
2951	Field Op	###	MA	Technician	Female	7445	Asian	Single	4	4	5	3950	14-07-202
2952	Splicing	###	MA	Foreman	Female	52336	Asian	Widowed	4	4	4	3951	28-06-202
2953	General	###	MA	Technician	Female	53521	White	Single	4	4	3	3952	26-05-202
2954	Technol	23-06	MA	Helpdesk	Female	48347	Hispanic	Married	4	4	4	3953	23-06-202
2955	Field Op	19-12	MA	Technician	Male	9268	Black	Widowed	4	4	1	3954	21-06-202
2956	Field Op	29-11	MA	Foreman	Male	20032	White	Single	4	4	3	3955	26-07-202
2957	Field Op	20-05	MA	Administrator	Male	59153	Other	Divorced	4	4	5	3956	08-06-202
2958	General	###	MA	Splicer	Female	20389	Hispanic	Divorced	4	4	2	3957	21-07-202
2959	Field Op	18-07	MA	Operator	Female	26286	Hispanic	Married	3	3	3	3958	04-08-202
2960	General	###	MA	Technician	Female	85739	Other	Divorced	3	3	3	3959	14-06-202
2961	General	18-02	MA	Laborer	Female	45331	Hispanic	Widowed	3	3	2	3960	11-06-202
2962	General	19-07	MA	Supervisor	Male	46093	Other	Widowed	3	3	3	3961	07-06-202
2963	Fielders	17-09	MA	Technician	Male	48911	Black	Divorced	3	3	1	3962	14-05-202
2964	Field Op	25-06	MA	Laborer	Male	18226	Asian	Married	3	3	1	3963	17-05-202
2965	Billable (	###	MA	Engineer	Female	90024	Hispanic	Married	3	3	1	3964	14-05-202
2966	General	###	MA	Project Manager	Female	2225	Black	Divorced	3	3	3	3965	12-07-202
2967	General	29-02	MA	Technician	Female	14864	Other	Single	3	3	2	3966	01-08-202
2968	General	###	MA	Flagger	Female	33532	Hispanic	Married	2	2	3	3967	10-05-202
2969	Field Op	###	MA	Technician	Male	37566	Black	Divorced	3	3	2	3968	11-07-202

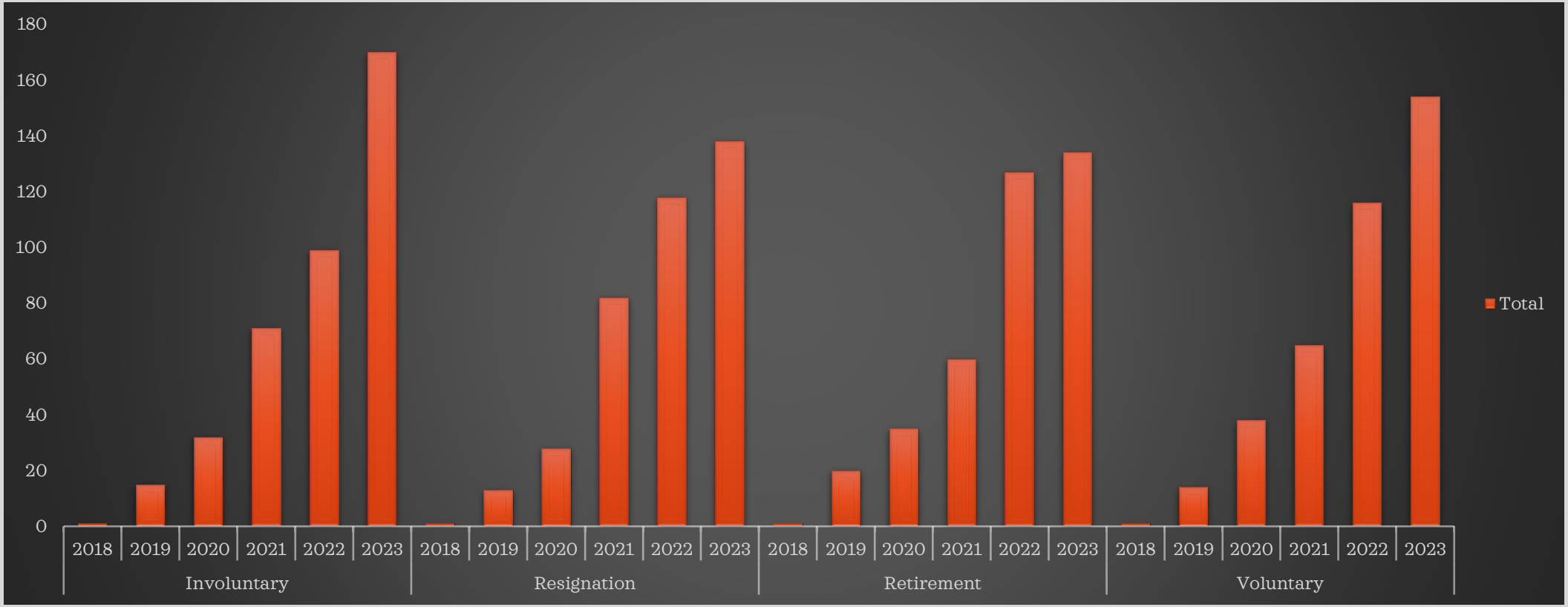
16. Use a calculated field in a pivot table to determine the average "Engagement Score" per year.

Quarters (StartDate)	(All)						
	Column Labels						
	2018	2019	2020	2021	2022	2023	Grand Total
Average of Engagement Score	2.988235294	2.894648829	2.964527027	2.951666667	2.908064516	2.976119403	2.939666667

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



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



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

SumProduct for "Port Greg"	Formula
510.83	SUMPRODUCT(([training_and_development_data1.xlsx]training_and_development_data!$F$2:$F$3001="Port Greg")*([training_and_development_data1.xlsx]training_and_development_data!$I$2:$I$3001))

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