



Employee Data Analysis

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Agenda



Introduction



Model View



Project Tasks



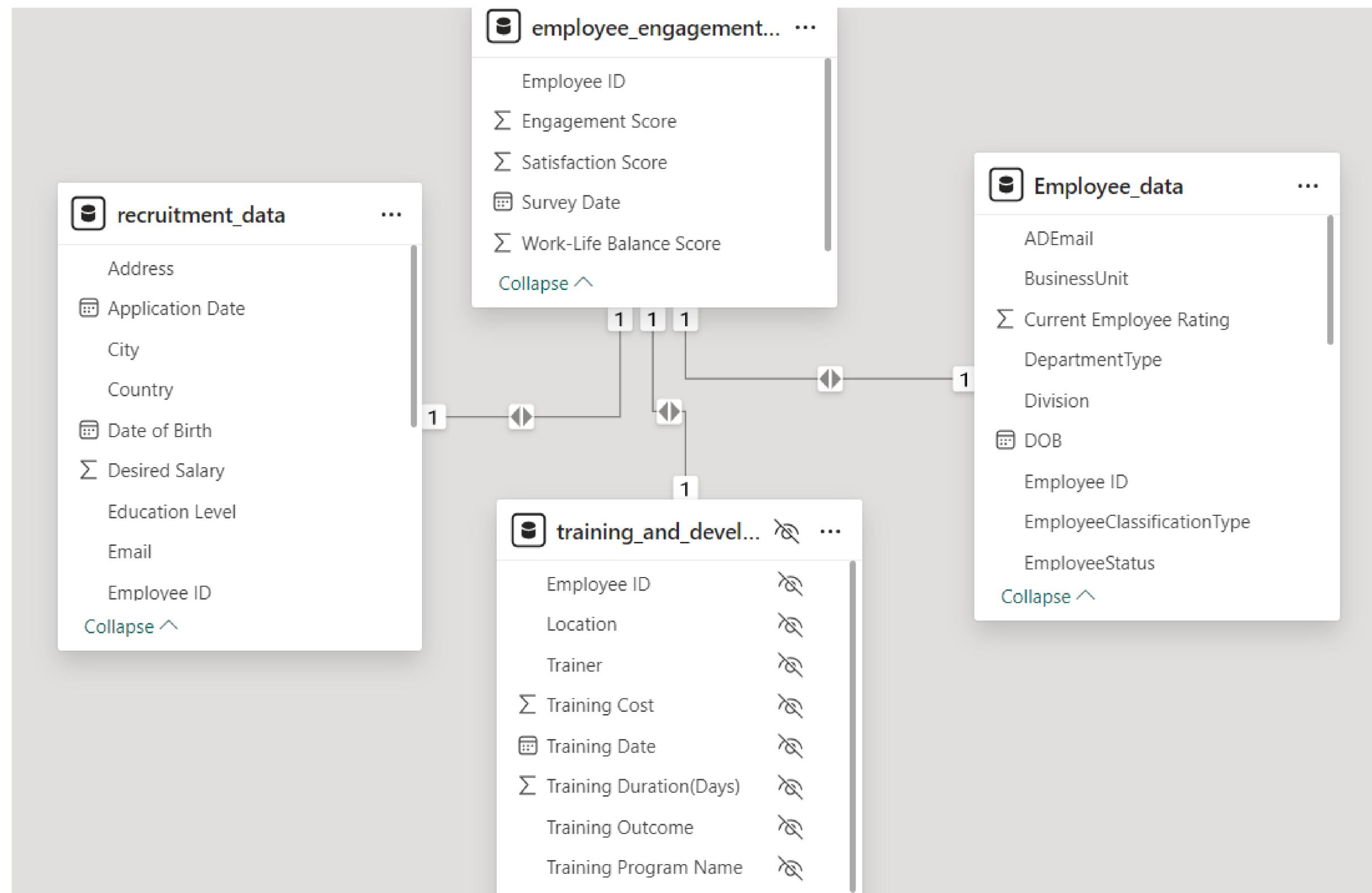
Dashboard



Introduction

The Employee Data Analysis project conducted during my Data Analysis Internship involved the utilization of various tools such as Excel and Power BI. The project aimed to analyze and interpret the company ' s employee data to gain valuable insights and make informed business decisions Through the analysis of employee demographics, performance metrics, and Employee rates. To identify patterns and trends that could enhance workforce management strategies. The data analysis techniques employed provided comprehensive visualizations and actionable recommendations for improving employee productivity, engagement, and Performance

Model View



Project Task

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

Row Labels	Count of Employee ID
Admin Offices	80
Executive Office	24
IT/IS	430
Production	2020
Sales	331
Software Engineering	115
Grand Total	3000

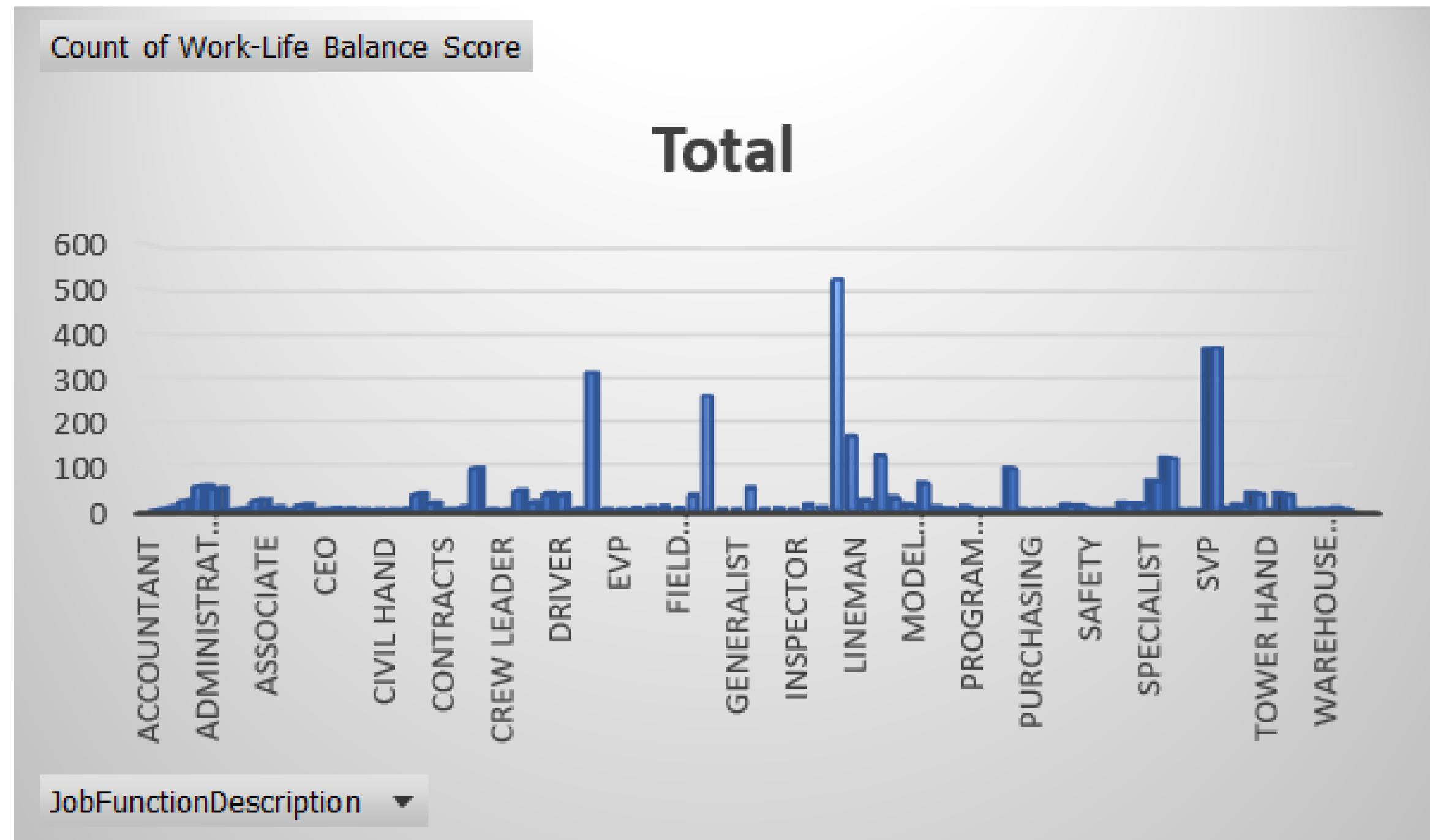
2. Apply conditional formatting to highlight employees with a "Performance Score" below 3 in red.

Title	LocationCode	RaceDesc	Current Employee Rating
Production Technician I	34904	White	4
Production Technician I	6593	Hispanic	3
Area Sales Manager	2330	Hispanic	4
Area Sales Manager	58782	Other	2
Area Sales Manager	33174	Other	3
Area Sales Manager	6050	Black	3
Area Sales Manager	90007	Hispanic	4
Area Sales Manager	97756	White	2
Area Sales Manager	78789	Black	3
Area Sales Manager	78207	Asian	5
Area Sales Manager	46204	Other	5
Area Sales Manager	30428	Asian	3
Area Sales Manager	80820	Other	3
Area Sales Manager	40220	White	3

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
Grand Total	3.048572859

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 TerminationType
Involuntary	388
Resignation	380
Retirement	377
Unk	1467
Voluntary	388
Grand Total	3000

The most common termination type is
Unknown followed by Voluntary.

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

Row Labels	Average of Engagement Score
Admin Offices	2.75
Executive Office	2.631578947
IT/IS	3.040178571
Production	2.886587771
Sales	2.926829268
Software Engineering	3.046875
(blank)	2.967961827
Grand Total	2.939666667

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

AB	AC	AD
1260	caitlin.robertson@bilearner.com	

For Employee 1260 supervisor's email id found using
Vlookup

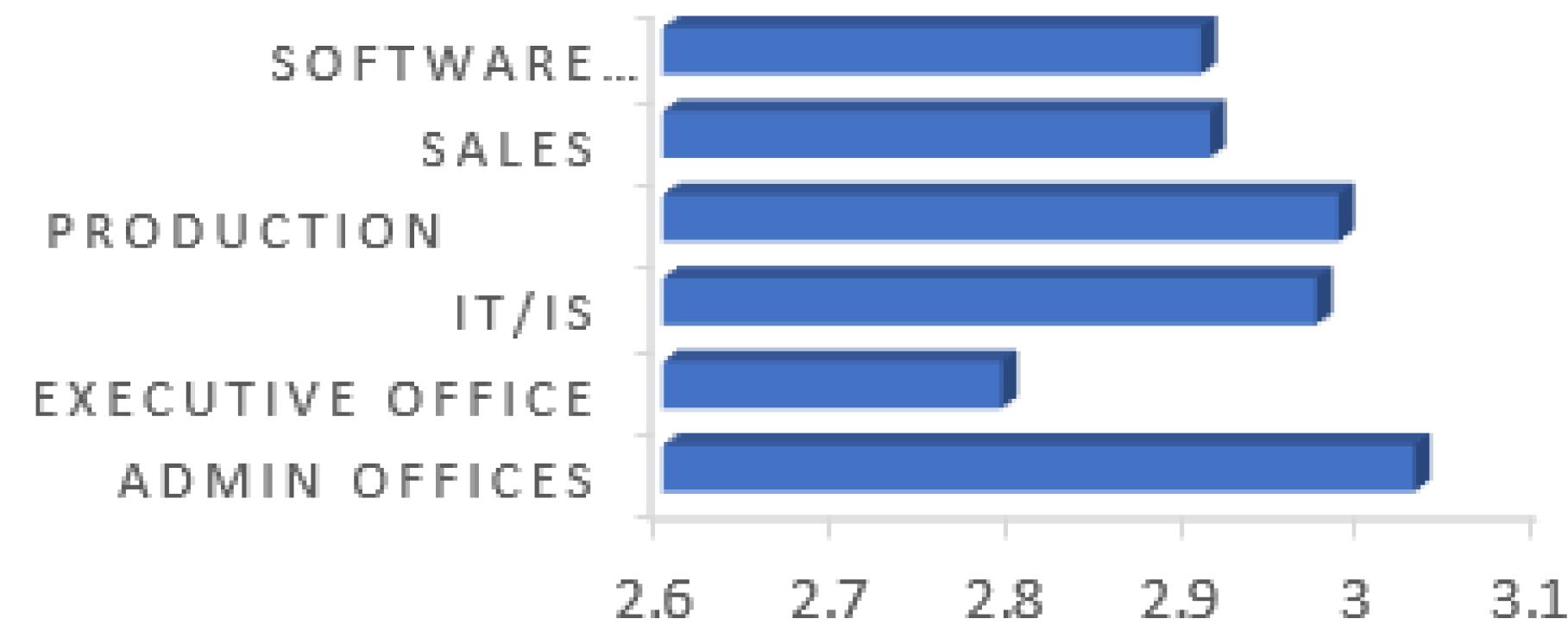
7. Use VLOOKUP to find the supervisor's email address for a specific employee.

AB	AC	AD
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For Employee 1260 supervisor's email id found using
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8. Can you identify the department with the highest average "Employee Rating?"

Average of Current Employee Rating



Admin Office department has the highest average "Employee Rating"

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	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
Grand Total	3000

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

	K	L	M	N
	1045	Customer Service		

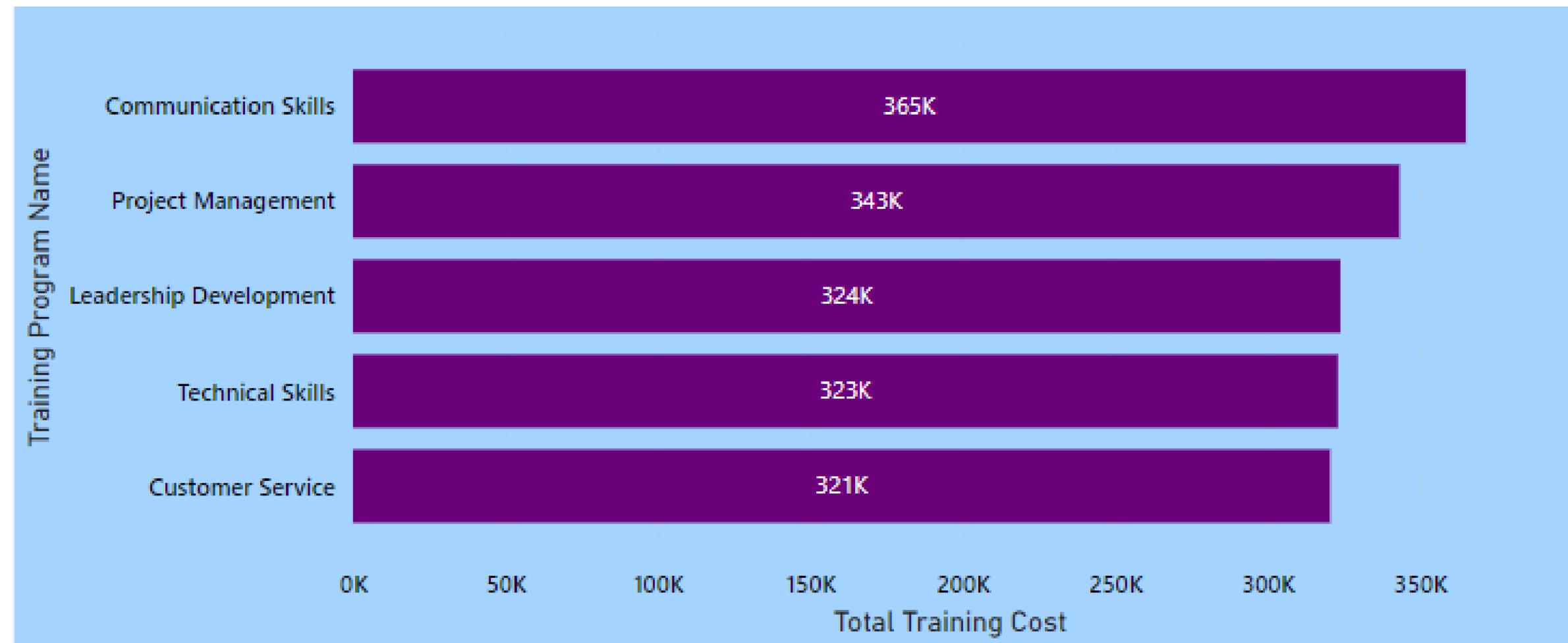
12. Create a multi-level pivot table to analyze the "Performance Score" by "BusinessUnit" and "JobFunctionDescription."

Count of JobFunctionDescription	Column Labels											
Row Labels	BPC	CCDR	EW	MSC	NEL	PL	PYZ	SVG	TNS	WBL	Grand Total	
Exceeds		36	39	39	39	30	34	35	46	41	30	369
Fully Meets		235	234	240	226	251	241	228	233	233	240	2361
Needs Improvement		24	17	16	20	11	16	23	20	15	15	177
PIP		8	10	7	11	12	10	13	5	8	9	93
Grand Total		303	300	302	296	304	301	299	304	297	294	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.



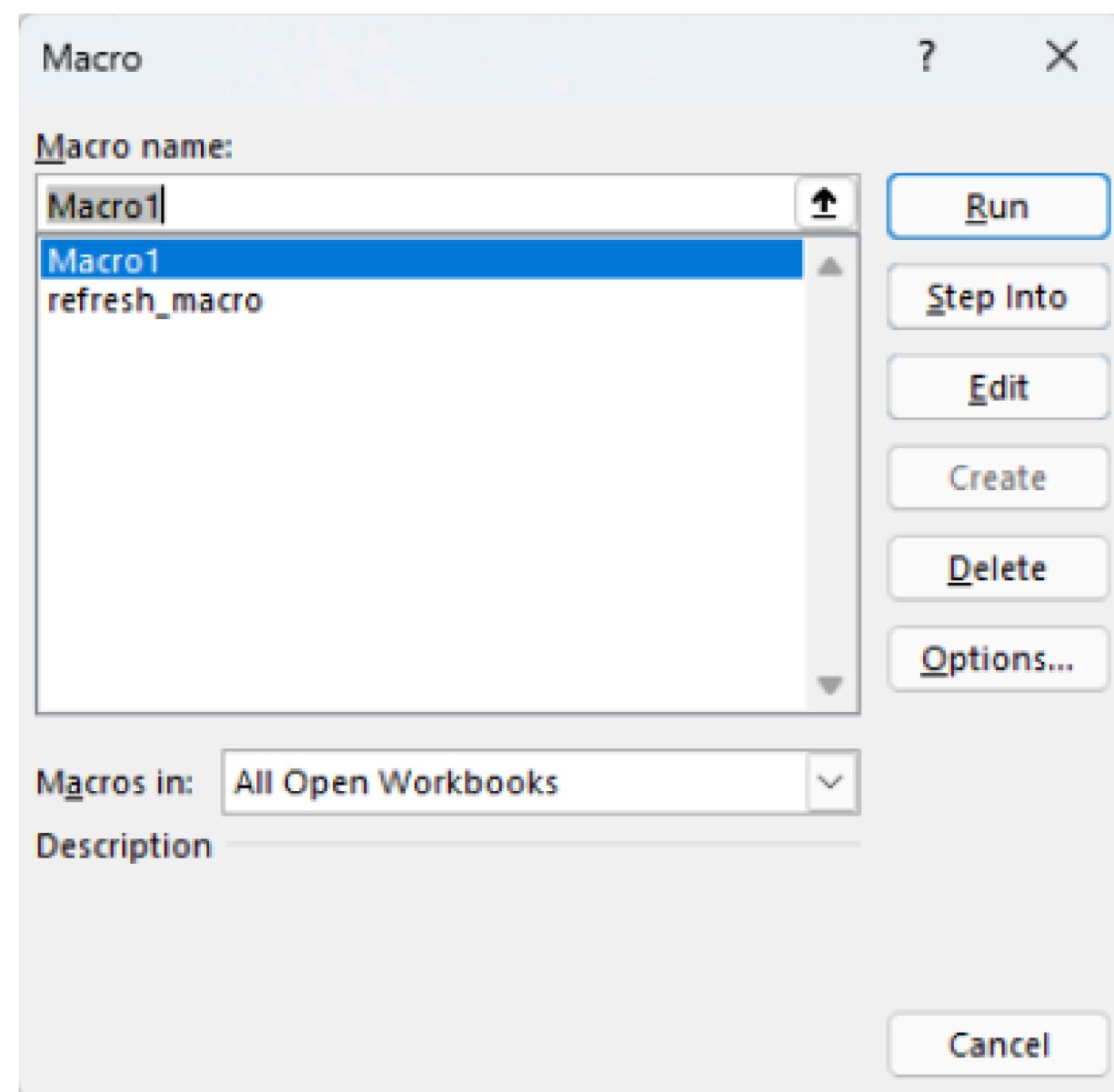
15. Apply advanced conditional formatting to highlight the top 10% and bottom 10% of employees based on "Current Employee Rating."

Division	DOB	State	JobFunctionDescription	GenderCode	LocationCode	RaceDesc	MaritalDesc	Performance Score	Current Employee Rating
Aerial	25-02-1964	MA	Lineman	Female	29605	Black	Widowed	PIP	2
Catv	19-05-1950	MA	Laborer	Female	51886	Other	Divorced	PIP	5
General - Sga	29-03-1969	MA	Vp	Female	66261	Hispanic	Widowed	PIP	4
Aerial	24-11-1944	MA	Coordinator	Female	26880	Other	Divorced	Exceeds	4
Fielders	13-12-1964	MA	Engineer	Female	35098	Hispanic	Married	PIP	5
Field Operations	23-01-1966	MA	Driller	Female	90728	Asian	Single	Exceeds	2
Field Operations	25-12-1986	MA	Construction Manager	Female	49149	Asian	Widowed	Exceeds	5
Field Operations	19-08-1949	MA	Laborer	Female	73771	Hispanic	Widowed	Exceeds	2
General - Sga	27-01-1960	MA	Supervisor	Female	92541	Hispanic	Single	Needs Improvement	4
Wireline Construction	14-11-1962	MA	Foreman	Male	47601	White	Widowed	Exceeds	2
Field Operations	27-12-1943	MA	Project Manager	Female	68361	Hispanic	Widowed	Exceeds	1
Field Operations	19-09-1978	MA	Driller	Female	71922	White	Widowed	Needs Improvement	2
Field Operations	22-11-1988	MA	Tower Hand	Female	51689	Other	Divorced	Exceeds	5
General - Sga	13-05-1948	MA	Vp	Female	97553	Black	Single	Exceeds	4
General - Con	17-05-1957	MA	Lineman	Female	92067	Asian	Single	Needs Improvement	5
Engineers	24-09-1943	MA	Technician	Female	65114	Other	Widowed	Exceeds	4
General - Con	20-10-1944	MA	Clerk	Female	9677	White	Widowed	Exceeds	2
Engineers	24-04-1992	MA	Project Manager	Female	38475	White	Single	Exceeds	4
Billable Consultants	30-03-1978	MA	Engineer	Female	25166	Asian	Married	Exceeds	2
Engineers	09-03-1946	MA	Engineer	Female	81288	Black	Divorced	Needs Improvement	4
Field Operations	17-05-1993	MA	Laborer	Female	45637	Hispanic	Divorced	Exceeds	2

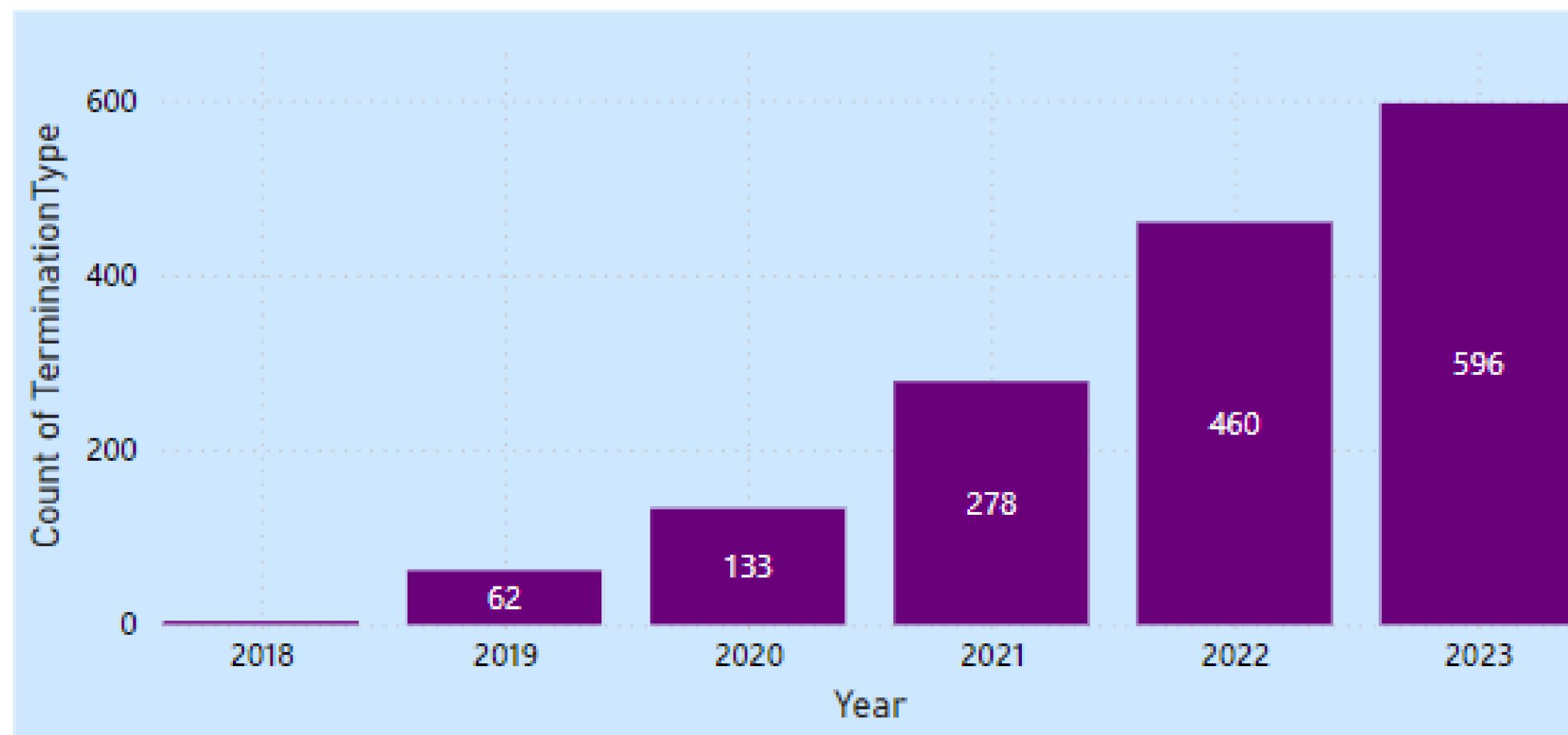
16. Use a calculated field in a pivot table to determine the average "Engagement Score" per year.

Row Labels	Average of Engagement Score
2022	2.918281382
2023	2.953667954
Grand Total	2.939666667

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



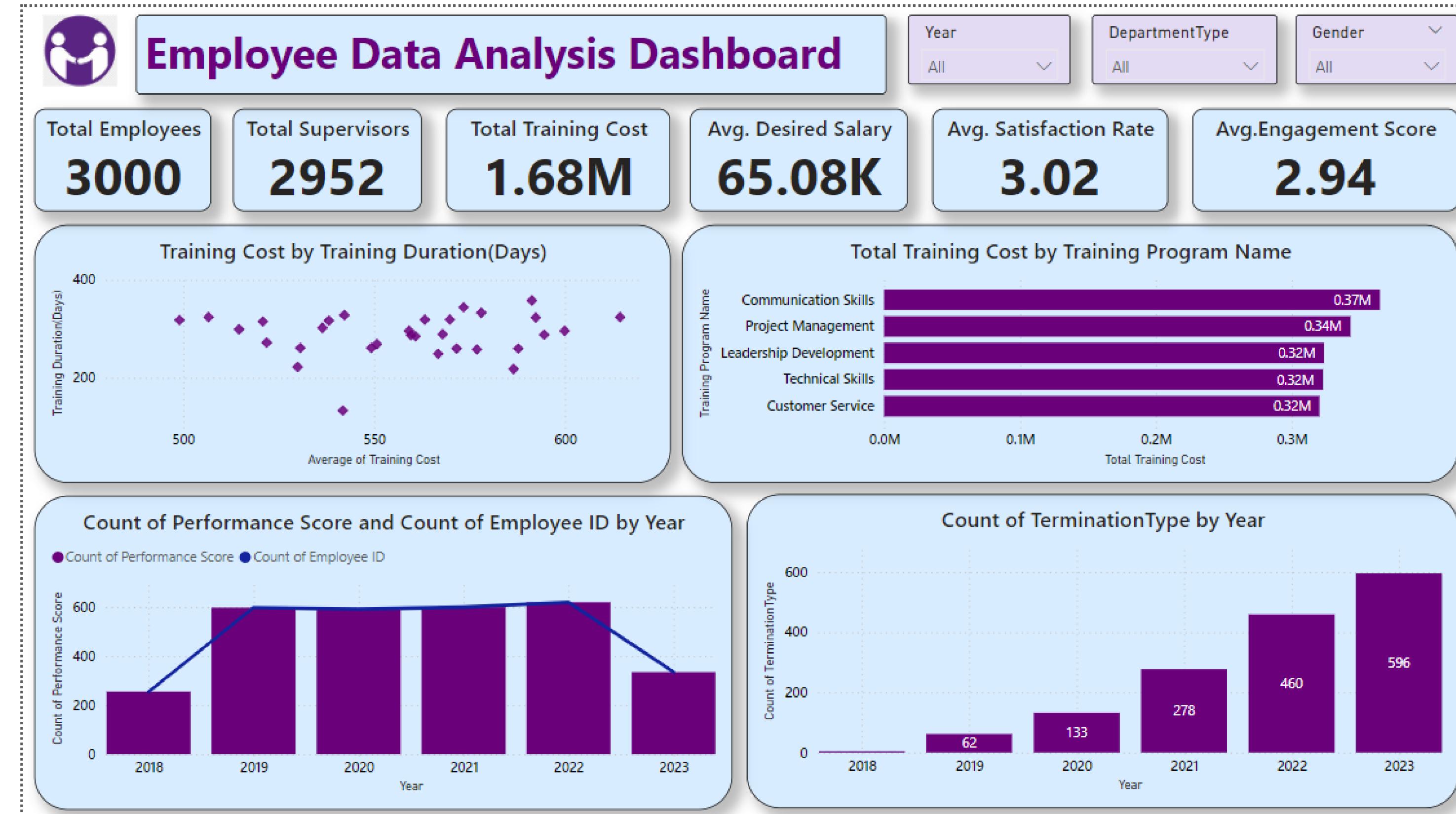
18. Create a histogram to understand the distribution of "ExitDate" for terminated employees.



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

=SUMPRODUCT([@[Training Duration(Days)]],[@[Training Cost]])			
G	H	I	J
	▼ Training Duration(Days)	▼ Training Cost	▼ Total Cost
Daniels	4	510.83	2043.32
hambers	2	582.37	1164.74
erson	4	777.06	3108.24
sher	2	824.3	1648.6
haffer	4	145.99	583.96
uke	2	838.07	1676.14
layton DVM	2	667.32	1334.64
well	2	758.18	1516.36
artman	2	101.21	202.42
lark	5	332.25	1661.25
elds	1	803.98	803.98
Martinez	3	887.08	2661.24
Marks	2	657.85	1315.7
nies	2	895.49	1790.98
Olson	1	539	539
on	2	606.68	1213.36
cintyre	3	265.73	797.19
Morgan DVM	2	673.29	1346.58
	5	436.98	2184.9

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





Thank you