



INTERNSHIP BY PSYLIQ

EMPLOYEE DATA ANALYSIS

PAVAN PANDHARE

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

Department	No. of Employees
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.

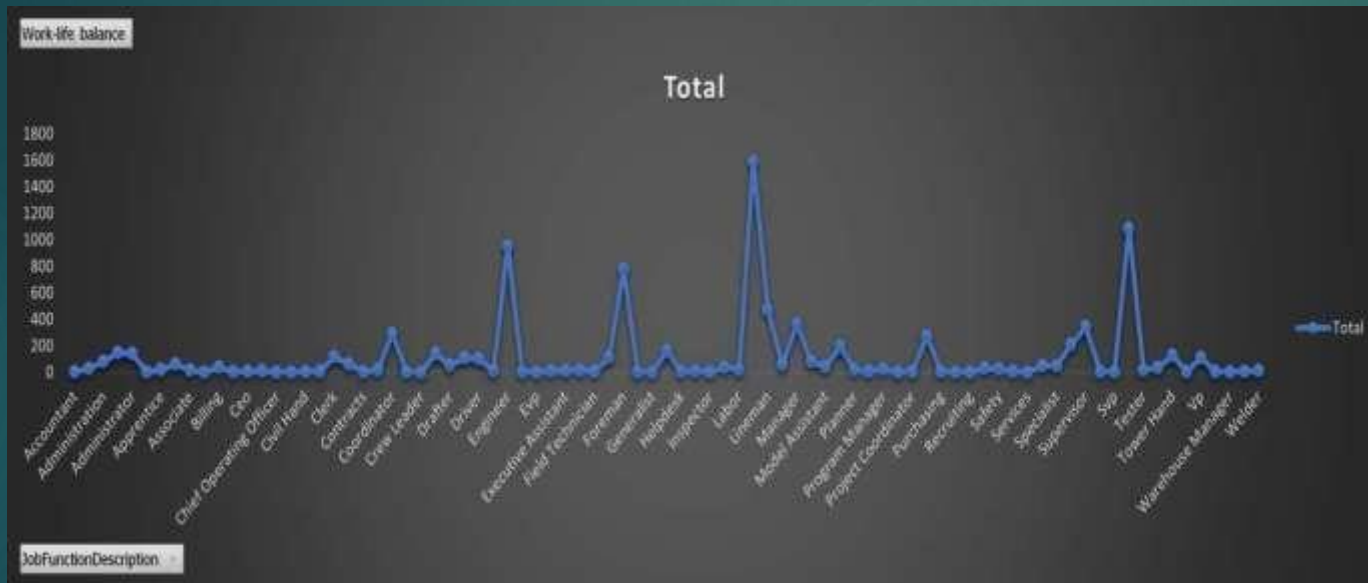
THERE ARE 2548 EMPLOYEE WHO HAVE PERFORMANCE SCORE BELOW 3.

JobFunc	Gender	Locatio	RaceDe	Marital	Performance Score	Current Employee Rati	Performance Score Rating
Technician	Male	71071	Other	Divorced	Exceeds	3	4
Foreman	Male	12122	Black	Divorced	Fully Meets	2	3
Engineer	Male	87065	White	Widowed	Fully Meets	4	3
Foreman	Male	10415	Hispanic	Married	Needs Improvement	4	2
Manager	Male	3763	Other	Widowed	Exceeds	4	4
Technician	Female	79623	Black	Divorced	Fully Meets	3	3
Technician	Female	69189	White	Divorced	Needs Improvement	3	2
Laborer	Female	5194	Hispanic	Single	Needs Improvement	3	2
Splicer	Male	8779	Black	Widowed	Exceeds	2	4
Lineman	Male	74682	Asian	Married	Fully Meets	3	3
Foreman	Male	78046	Hispanic	Married	Needs Improvement	1	2
Coordinator	Male	27270	Hispanic	Divorced	Needs Improvement	3	2
Tower Har	Male	12703	Hispanic	Single	Fully Meets	1	3
Mechanic	Male	66835	Black	Widowed	Needs Improvement	5	2
Flagger	Male	66150	Asian	Divorced	Needs Improvement	3	2
Supervisor	Male	64288	Other	Married	Exceeds	4	4
Engineer	Female	94333	Asian	Divorced	Exceeds	1	4
Foreman	Female	45453	Black	Single	Fully Meets	4	3
Driver	Female	81905	Asian	Divorced	Needs Improvement	3	2
Technician	Female	12491	Black	Married	Needs Improvement	3	2
Foreman	Male	64350	Asian	Married	Fully Meets	4	3
Director	Male	74124	Other	Married	Exceeds	4	4
Manager	Male	33379	Hispanic	Widowed	Exceeds	2	4
Laborer	Male	34481	Other	Divorced	Fully Meets	2	3
Foreman	Male	90406	Asian	Widowed	Fully Meets	2	3
Engineer	Male	95774	Asian	Divorced	Needs Improvement	2	2
Laborer	Female	16058	Asian	Widowed	Needs Improvement	2	2
Groundma	Female	45149	Hispanic	Married	Fully Meets	2	3

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

GENDER	SATISFACTION RATING
Female	2.99
Male	2.95
Grand Total	2.97

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."

The Most Common Termination Type is Resignation

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

Department	Average of Engagement Score
Admin Offices	2.93
Executive Office	3.38
IT/IS	3.03
Production	2.91
Sales	2.99
Software Engineering	2.97
Grand Total	2.94

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

Formula bar: `=VLOOKUP(A2,recruitment_data!A1:H3001,8,FALSE)`

	A	B	C	D	E	F	G
1	Employee ID	FirstName	LastName	Title	Supervisor	ADEmail	Supervisor Email
2	1001	Susan	Exantus	Software Engineer	Angela Carlson	susan.exantus@bilearner.com	perezjanet@example.org
3	1002	Sandra	Martin	Software Engineer	Angela Hayes	sandra.martin@bilearner.com	grossmark@example.com
4	1003	Keyla	Del Bosque	Software Engineer	Christina Copeland	keyla.del.bosque@bilearner.com	katiemaldonado@example.com
5	1004	Andrew	Szabo	Software Engineer	Jennifer Cohen	andrew.szabo@bilearner.com	sheila73@example.com
6	1005	Luke	Patronick	Software Engineer	Mr. Jesus Richards	luke.patronick@bilearner.com	emilypatterson@example.org
7	1006	Colby	Andreola	Software Engineer	Beth Johnson	colby.andreola@bilearner.com	pvelasquez@example.net
8	1007	Edward	TRUE	Software Engineer	Raymond Adams	edward.true@bilearner.com	aclayton@example.net
9	1008	Judith	Carabbio	Software Engineer	Jessica Rhodes	judith.carabbio@bilearner.com	jeffreyellis@example.com
10	1009	Adell	Saada	Software Engineer	Steven Tran	adell.saada@bilearner.com	hamptontimothy@example.net
11	1010	Kamari	Hunter	Software Engineer	Kristen Collier	kamari.hunter@bilearner.com	cshaw@example.net
12	1011	Sarah	Malone	Software Engineer	David Lopez	sarah.malone@bilearner.com	sloankrista@example.org
13	1012	Skyler	Blackwell	Software Engineer	Candice Schmidt	skyler.blackwell@bilearner.com	shelia63@example.net
14	1013	Jasmin	Shah	Software Engineer	Christy Craig	jasmin.shah@bilearner.com	fraziermichelle@example.net
15	1014	Kole	Quinn	Shared Services Manager	Jermaine Weaver	kole.quinn@bilearner.com	brentswanson@example.org
16	1015	Ansley	Jackson	Shared Services Manager	James Barajas	ansley.jackson@bilearner.com	clarkdawn@example.net
17	1016	Jayda	Reese	Senior BI Developer	Tyler Davis	jayda.reese@bilearner.com	rachel98@example.com
18	1017	Julien	Whitehead	Senior BI Developer	Joshua Gonzalez	julien.whitehead@bilearner.com	charles11@example.net
19	1018	Alan	Haynes	Senior BI Developer	Justin Sherman	alan.haynes@bilearner.com	smithashley@example.org
20	1019	Kamryn	Herrera	Software Engineer	Sara Holland	kamryn.herrera@bilearner.com	joe34@example.net
21	1020	Kelvin	Foster	Software Engineer	Shelia Graham	kelvin.foster@bilearner.com	corey49@example.net
22	1021	Joe	Fletcher	Software Engineer	Amanda Hayden	joe.fletcher@bilearner.com	jennifer31@example.com
23	1022	Frederick	Howe	Software Engineer	Nicole Haynes	frederick.howe@bilearner.com	gibbsjacob@example.net
24	1023	Nickolas	Davila	Shared Services Manager	Debra Morales	nickolas.davila@bilearner.com	kristinross@example.net
25	1024	Kasey	Boyer	Shared Services Manager	Chad Andrews	kasey.boyer@bilearner.com	melvinzimmerman@example.org
26	1025	Giovanni	Jenkins	Senior BI Developer	John Wallace	giovanni.jenkins@bilearner.com	jameslucas@example.com
27	1026	Alexis	Moss	Senior BI Developer	Benjamin Frederick	alexis.moss@bilearner.com	prodriguez@example.com
28	1027	Joanna	Murphy	Senior BI Developer	Michael Ramos	joanna.murphy@bilearner.com	sandraferrell@example.net
29	1028	Joseph	Schmidt	Software Engineer	Dana Boone	joseph.schmidt@bilearner.com	lisa@example.com

8). Can you identify the department with the highest average "Employee Rating?"

Department	Average of Current Employee Rating
Admin Offices	3.03
Executive Office	2.79
IT/IS	2.97
Production	2.98
Sales	2.91
Software Engineering	2.90
Grand Total	2.97

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."

Race Desc	Female	Male
Asian	346	283
Black	346	272
Hispanic	325	247
Other	318	264
White	347	252

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

Employee id	Training Program Name
1010	Communication Skills
1020	Technical Skills
1064	Leadership Development
1032	Technical Skills

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



Department	Performance -Score
BPC	303
CCDR	300
EW	302
MSC	296
NEL	304
PL	301
PYZ	299
SVG	304
TNS	297
WBL	294

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.



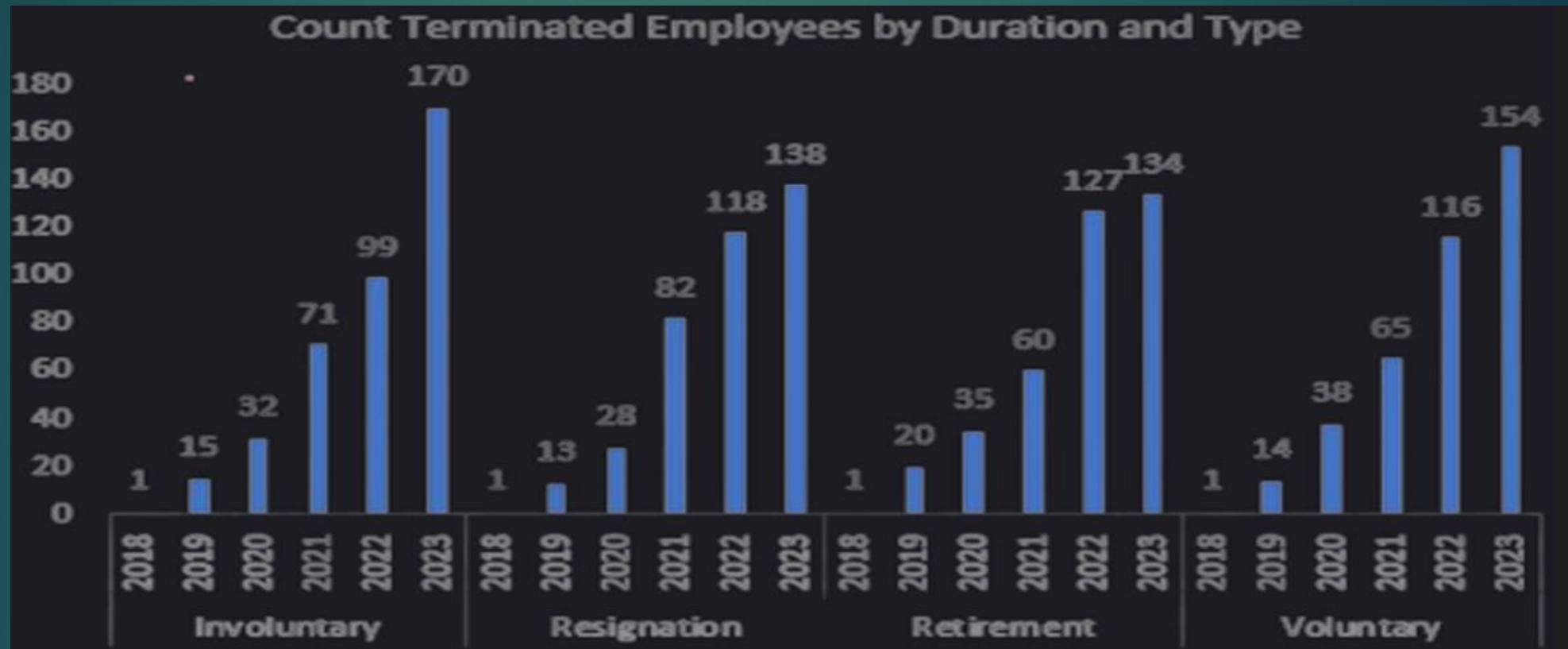
15). Apply advanced conditional formatting to highlight the top 10% and bottom 10% of employees based on "Current Employee Rating."

fx 2										
R	S	T	U	V	W	X	Y	Z	AA	AB
DOB	State	JobFunctionDesc	Gender	Co Location	C RaceDesc	MaritalDe	Performance Score	Current Employee Rating	Satisfaction score	work life balance score
10-07-1969	MA	Accounting	Female	34904	White	Widowed	Fully Meets	4	2	
30-08-1965	MA	Laborer	Male	6593	Hispanic	Widowed	Fully Meets	3	1	
10-06-1991	MA	Assistant	Male	2330	Hispanic	Widowed	Fully Meets	4	2	
04-04-1998	ND	Clerk	Male	58782	Other	Single	Fully Meets	2	5	
29-08-1969	FL	Laborer	Female	33174	Other	Married	Fully Meets	3	5	
04-03-1949	CT	Driver	Male	6050	Black	Married	Fully Meets	3	3	
07-01-1942	CA	Technician	Female	80007	Hispanic	Divorced	Exceeds	4	5	
05-07-1957	OR	Engineer	Female	57756	White	Divorced	Fully Meets	2	4	
15-05-1974	TX	Executive Assista	Male	78789	Black	Widowed	Exceeds	3	3	
11-11-1949	TX	Engineer	Male	78207	Asian	Widowed	Fully Meets	5	5	
26-01-1964	IN	Technician	Female	46204	Other	Single	Fully Meets	5	2	
04-06-1948	GA	Technician	Female	30428	Asian	Married	Fully Meets	3	2	
24-11-1981	CO	Splicer	Male	80820	Other	Single	Fully Meets	3	2	
11-06-1951	KY	Controller	Female	40220	White	Divorced	Fully Meets	3	4	
21-11-1989	NV	Lineman	Male	89139	Asian	Widowed	Exceeds	4	2	
24-11-1952	MA	Laborer	Male	2810	Black	Single	Exceeds	3	5	
04-08-1994	KY	Coordinator	Male	2621	Asian	Widowed	Fully Meets	3	2	
15-11-1983	KY	Director	Male	44553	Other	Widowed	Fully Meets	3	2	
12-07-1985	KY	Supervisor	Female	5360	Other	Married	Exceeds	4	5	
05-01-1996	TX	Driller	Female	16325	White	Divorced	Exceeds	2	3	

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

Year	Average of Engagement Score
2018	2.90
2019	3.07
2020	2.94
2021	2.89
2022	2.94
2023	2.83

17). Create a histogram to understand the distribution of "Exit Date" for terminated employees.



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

Location	Training Cost
Lake Kimfurt	332.25
Chadport	578.58
Toddtown	857.65
Powellland	436.98