



HR DATA ANALYSIS

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POWERED BY

PSYLIQ



INTRODUCTION

- HR Data Analysis is the First task provided by PSYLIQ during my internship.
- This project aims in demonstrating intern's skills in using EXCEL and Visualization.
- Primary objective in this project is to analyze the given HR dataset .
- Entire project is performed in MS-Excel and Tableau.



AGENDA

01.

DATA OVERVIEW

02.

DATA QUESTIONS

03.

DATA DASHBOARD

04.

CONCLUSION

DATA OVERVIEW

- Five '**.csv**' files were provided which was combined in Excel for further analysis.
- The resulting dataset consist of **4410 rows** and **30 columns** of distinct data.
- Following are the columns present in dataset:

Basic employee details		Job details	Compensation	Professional History	Satisfaction and Involvement
EmployeeID		Department	MonthlyIncome	NumCompaniesWorked	EnvironmentSatisfaction
Age		JobLevel	PercentSalaryHike	TotalWorkingYears	JobSatisfaction
Gender		JobRole	StockOptionLevel	TrainingTimesLastYear	WorkLifeBalance
MaritalStatus		StandardHours	YearsAtCompany	JobInvolvement	
Education			YearsSinceLastPromotion	PerformanceRating	
EducationField			RelationshipSatisfaction		
Over18					YearsWithCurrManager
Attrition					
BusinessTravel					
DistanceFromHome					
EmployeeCount					

DATA QUESTIONS

1. Using Excel, how would you filter the dataset to only show employees aged 30 and above?

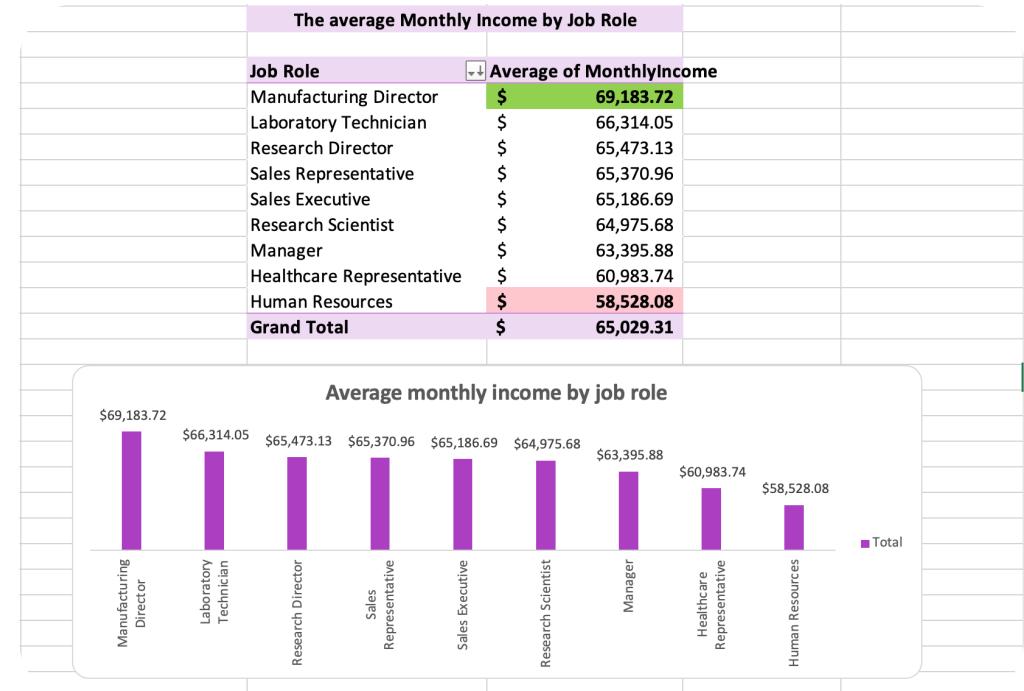
- Select **Data** and choose **Filter** in Ribbon
- Click drop-down arrow near Age column
- Select drop-down list **choose one**
- Select **Greater than or equal** to and enter **30** as value.
- Click **Apply filter**

A	B	C	D	E	F	G	H	I	J	K	L	M
EmployeeID	Age	Attrition	BusinessTravel	Department	DistanceFromHome	Educati	EducationField	EmployeeCo	Gender	JobLevel	JobRole	MaritalStat
1	67	30 No	Travel_Rarely	Research & Development	33	3 Life Sciences	1 Female	4 Research Director	Married			
2	81	30 No	Travel_Rarely	Research & Development	10	3 Life Sciences	1 Male	2 Research Scientist	Divorced			
3	97	30 No	Non-Travel	Sales	25	4 Other	1 Male	1 Healthcare Representative	Married			
4	124	30 No	Travel_Rarely	Research & Development	3	3 Life Sciences	1 Female	2 Manager	Married			
5	128	30 Yes	Travel_Frequently	Sales	3	2 Marketing	1 Male	3 Research Scientist	Single			
6	145	30 No	Travel_Rarely	Sales	5	4 Medical	1 Female	2 Manufacturing Director	Single			
7	153	30 No	Travel_Rarely	Sales	25	3 Marketing	1 Male	1 Sales Executive	Single			
8	162	30 No	Non-Travel	Research & Development	15	3 Medical	1 Female	2 Sales Executive	Married			
9	166	30 No	Non-Travel	Research & Development	2	4 Life Sciences	1 Female	3 Research Scientist	Married			
10	169	30 No	Non-Travel	Sales	10	2 Life Sciences	1 Male	3 Laboratory Technician	Single			
11	180	30 No	Travel_Rarely	Research & Development	2	3 Life Sciences	1 Male	1 Sales Executive	Single			
12	223	30 Yes	Travel_Frequently	Research & Development	9	3 Other	1 Male	2 Healthcare Representative	Married			
13	244	30 No	Travel_Frequently	Research & Development	4	5 Technical Degree	1 Male	3 Manager	Divorced			
14	288	30 No	Travel_Rarely	Research & Development	8	3 Life Sciences	1 Male	2 Sales Executive	Divorced			
15	324	30 No	Travel_Rarely	Research & Development	20	3 Medical	1 Male	1 Laboratory Technician	Married			
16	345	30 No	Travel_Rarely	Research & Development	7	3 Technical Degree	1 Male	2 Research Director	Single			
17	366	30 No	Travel_Frequently	Research & Development	4	5 Medical	1 Male	5 Sales Representative	Divorced			
18	445	30 No	Travel_Rarely	Sales	3	4 Marketing	1 Male	1 Sales Executive	Divorced			
19	463	30 Yes	Travel_Rarely	Sales	2	3 Life Sciences	1 Male	2 Healthcare Representative	Married			
20	473	30 No	Travel_Rarely	Research & Development	4	3 Life Sciences	1 Female	5 Healthcare Representative	Married			
21	475	30 Yes	Travel_Frequently	Research & Development	8	4 Medical	1 Male	1 Sales Executive	Single			
22	525	30 No	Travel_Rarely	Research & Development	8	3 Medical	1 Female	1 Sales Executive	Married			
23	587	30 No	Travel_Rarely	Research & Development	7	2 Life Sciences	1 Female	1 Manufacturing Director	Married			
24	608	30 No	Travel_Rarely	Sales	20	3 Marketing	1 Male	3 Sales Executive	Divorced			
25	617	30 No	Travel_Rarely	Sales	29	3 Marketing	1 Male	1 Sales Executive	Divorced			
26	629	30 No	Travel_Rarely	Sales	9	3 Marketing	1 Female	1 Research Scientist	Married			
27	674	30 No	Non-Travel	Research & Development	2	4 Other	1 Male	1 Research Scientist	Single			
28	684	30 No	Travel_Rarely	Sales	9	1 Marketing	1 Male	4 Research Director	Married			
29	691	30 No	Travel_Rarely	Research & Development	6	4 Medical	1 Female	1 Sales Executive	Married			
30	756	30 No	Travel_Rarely	Sales	3	3 Life Sciences	1 Male	3 Sales Executive	Divorced			
31	792	30 No	Travel_Rarely	Sales	1	2 Technical Degree	1 Male	1 Laboratory Technician	Married			
32	795	30 No	Non-Travel	Research & Development	8	3 Life Sciences	1 Male	1 Manufacturing Director	Divorced			
33	817	30 No	Travel_Rarely	Research & Development	1	2 Life Sciences	1 Male	2 Sales Executive	Divorced			

DATA QUESTIONS

2. Create a pivot table to summarize the average Monthly Income by Job Role.

- Manufacturing Director found to have highest average monthly income
- Meanwhile, Human resources found to have lowest average monthly income.



DATA QUESTIONS

3. Apply conditional formatting to highlight employees with Monthly Income above the company's average income.

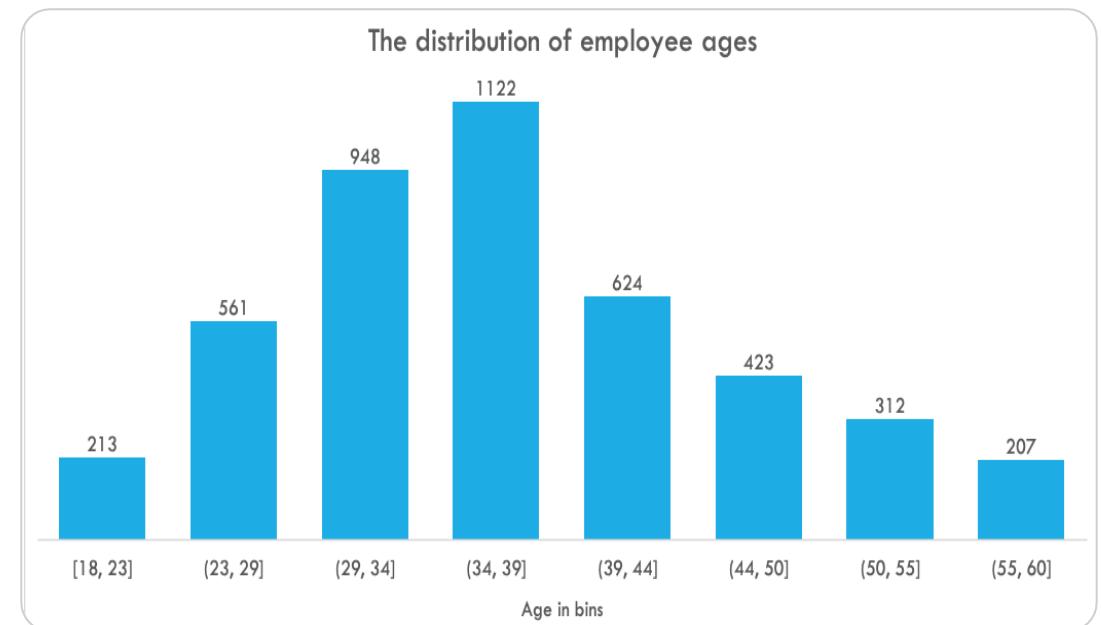
- Select entire dataset and choose conditional formatting
- Select New rule , choose classic style, choose use formula to determine which cells to format
- Enter formula = $\$N2 > \text{AVERAGE}(\$N:\$N)$
(Monthly income column is present in column N)
- **1479 employees** found to have monthly income greater than average monthly income.

employeeID	Age	Attrition	BusinessTravel	Department	DistanceFromHome	Education	EducationField	EmployeeCount	Gender	JobLevel	JobRole	MaritalStatus	MonthlyIncome
1	51	No	Travel_Rarely	Sales	6	2	Life Sciences	1	Female	1	Healthcare Representative	Married	\$ 1,31,160
2	31	Yes	Travel_Frequently	Research & Development	10	1	Life Sciences	1	Female	1	Research Scientist	Single	\$ 41,890
3	32	No	Travel_Frequently	Research & Development	17	4	Other	1	Male	4	Sales Executive	Married	\$ 1,93,280
4	38	No	Non-Travel	Research & Development	2	5	Life Sciences	1	Male	3	Human Resources	Married	\$ 83,210
5	32	No	Travel_Rarely	Research & Development	10	1	Medical	1	Male	1	Sales Executive	Single	\$ 23,420
6	46	No	Travel_Rarely	Research & Development	8	3	Life Sciences	1	Female	4	Research Director	Married	\$ 40,710
7	28	Yes	Travel_Rarely	Research & Development	11	2	Medical	1	Male	2	Sales Executive	Single	\$ 58,130
8	29	No	Travel_Rarely	Research & Development	18	3	Life Sciences	1	Male	2	Sales Executive	Married	\$ 31,430
9	31	No	Travel_Rarely	Research & Development	1	3	Life Sciences	1	Male	3	Laboratory Technician	Married	\$ 20,440
10	25	No	Non-Travel	Research & Development	7	4	Medical	1	Female	4	Laboratory Technician	Divorced	\$ 1,34,640
11	45	No	Travel_Rarely	Research & Development	17	2	Medical	1	Male	2	Laboratory Technician	Married	\$ 79,910
12	36	No	Travel_Rarely	Research & Development	28	1	Life Sciences	1	Male	1	Laboratory Technician	Married	\$ 33,770
13	55	No	Travel_Rarely	Research & Development	14	4	Life Sciences	1	Female	1	Sales Executive	Single	\$ 55,380
14	47	Yes	Non-Travel	Research & Development	1	1	Medical	1	Male	1	Research Scientist	Married	\$ 57,620
15	28	No	Travel_Rarely	Research & Development	1	3	Life Sciences	1	Male	1	Manufacturing Director	Married	\$ 25,920
16	37	No	Travel_Rarely	Research & Development	1	3	Life Sciences	1	Male	2	Healthcare Representative	Married	\$ 53,460
17	21	No	Travel_Rarely	Research & Development	3	2	Life Sciences	1	Male	1	Laboratory Technician	Single	\$ 42,130
18	37	No	Non-Travel	Research & Development	1	3	Medical	1	Male	2	Sales Executive	Divorced	\$ 41,270
19	35	No	Travel_Rarely	Sales	7	4	Life Sciences	1	Male	1	Sales Representative	Divorced	\$ 24,380
20	38	No	Travel_Rarely	Research & Development	8	3	Life Sciences	1	Female	1	Manager	Divorced	\$ 68,700
21	26	No	Travel_Frequently	Research & Development	1	4	Other	1	Male	2	Laboratory Technician	Divorced	\$ 1,04,470
22	50	No	Travel_Rarely	Sales	8	4	Life Sciences	1	Male	1	Research Scientist	Divorced	\$ 96,670
23	53	No	Travel_Rarely	Research & Development	11	4	Life Sciences	1	Female	2	Research Scientist	Married	\$ 21,480
24	42	No	Travel_Rarely	Research & Development	4	4	Life Sciences	1	Male	1	Manufacturing Director	Married	\$ 89,260
25	29	No	Travel_Frequently	Research & Development	16	4	Medical	1	Male	1	Laboratory Technician	Single	\$ 65,130
26	55	No	Travel_Rarely	Research & Development	1	4	Other	1	Female	1	Research Scientist	Married	\$ 67,990
27	26	No	Travel_Frequently	Research & Development	9	3	Life Sciences	1	Female	1	Manager	Married	\$ 1,62,910
28	37	No	Travel_Rarely	Sales	5	1	Marketing	1	Male	1	Research Scientist	Single	\$ 27,050
29	44	Yes	Travel_Frequently	Research & Development	1	2	Medical	1	Male	2	Research Scientist	Divorced	\$ 1,03,330
30	38	No	Travel_Rarely	Sales	2	3	Marketing	1	Female	1	Manager	Divorced	\$ 44,480
31	26	Yes	Travel_Rarely	Research & Development	4	3	Medical	1	Male	3	Research Scientist	Divorced	\$ 68,540
32	28	No	Travel_Rarely	Research & Development	7	3	Other	1	Male	1	Human Resources	Single	\$ 96,370
33	49	No	Travel_Frequently	Research & Development	1	1	Medical	1	Female	2	Research Scientist	Single	\$ 35,910
34	36	No	Travel_Rarely	Sales	5	3	Technical Degree	1	Male	3	Sales Executive	Single	\$ 54,050
35	31	No	Travel_Frequently	Research & Development	9	4	Medical	1	Male	1	Sales Executive	Divorced	\$ 46,840
36	25	Yes	Travel_Rarely	Research & Development	8	3	Medical	1	Male	2	Manager	Single	\$ 157,870
37	37	No	Travel_Frequently	Sales	9	1	Marketing	1	Male	1	Laboratory Technician	Married	\$ 15,140
38	42	No	Travel_Frequently	Sales	2	2	Marketing	1	Male	3	Research Director	Married	\$ 29,560
39	18	Yes	Travel_Rarely	Research & Development	1	4	Life Sciences	1	Male	1	Sales Executive	Single	\$ 23,350
40	35	No	Travel_Rarely	Sales	20	2	Life Sciences	1	Male	1	Laboratory Technician	Married	\$ 51,540

DATA QUESTIONS

4. Create a bar chart in Excel to visualize the distribution of employee ages.

- Highest count of 1122 employees found to fall between the age of 34 and 39.
- Lowest count of 207 employees found to fall between the age of 55 and 60.



DATA QUESTIONS

5. Identify and clean any missing or inconsistent data in the "Department" column.

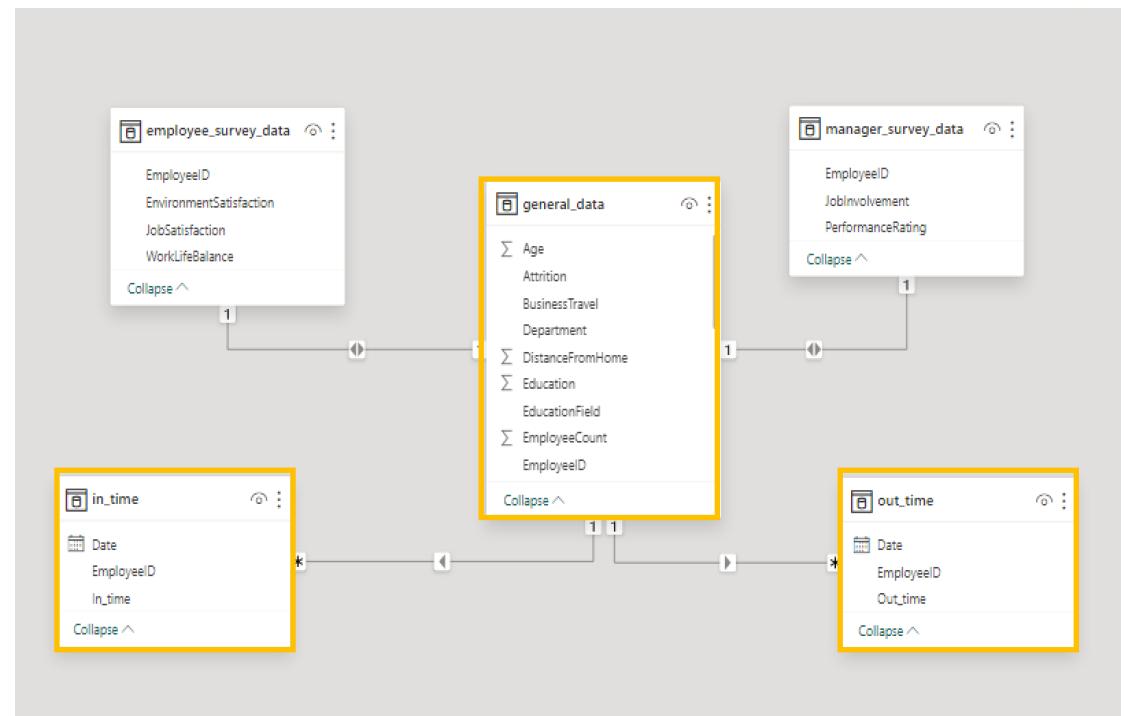
- There are no missing or inconsistent data found in department column.
 - This ensures data consistency.

Department	DistanceFromHome	Education	Education
Sales	0-10	High School	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate
Sales	0-10	Postgraduate	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate
Sales	0-10	Postgraduate	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate
Research & Development	0-10	Postgraduate	Postgraduate

DATA QUESTIONS

6. In Power BI, establish a relationship between the "EmployeeID" in the employee data and the "EmployeeID" in the time tracking data.

- Before establishing relationship, some data processing methods are applied on all available data.
- Provided clear headers, removed NA columns linked to weekends/holidays, and performed unpivoting, datatype conversion, and renaming (Date, In Time, Out Time)
- One – to – many cardinality.



DATA QUESTIONS

7. Using DAX, create a calculated column that calculates the average years employee has spent with their current manager.

```
Avg_years_with_curr_manager = CALCULATE(AVERAGE(general_data [YearsWithCurrManager] ))
```

- Average years the employee has spent with their current manager was found to be **4.12 year**

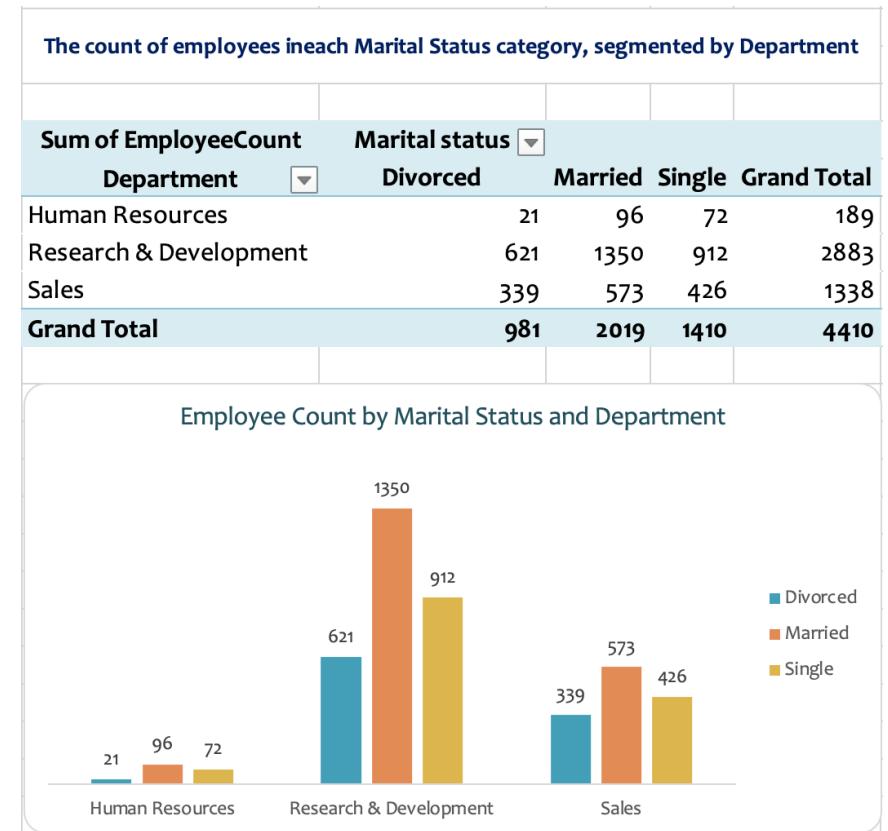
4.12

Avg_years_with_curr_manager

DATA QUESTIONS

8. Using Excel, create a pivotable that displays the count of employees in each Marital Status category, segmented by Department.

- The **highest** number of employees, about **1350**, is found among those who are **married** and belong to the **Research & Development department**.
- In contrast, the **lowest** number of employees, about **21**, found to be in **Human Resources department** and are **Divorced**.



DATA QUESTIONS

9. Apply conditional formatting to highlight employees with both above-average Monthly Income and above-average Job Satisfaction.

- Select entire dataset and choose conditional formatting
- Select New rule , choose classic style, choose use formula to determine which cells to format
- Enter formula = $\text{AND}(\$N2 > \text{AVERAGE}(\$N:\$N), \$Z2 > \text{AVERAGE}(\$Z:\$Z))$
 (Monthly income - column N and Job satisfaction - column Z)
- **955 employees** are found to have both monthly income and job satisfaction greater than the averages.

EmployeeID	Age	Attrition	BusinessTravel	Department	DistanceFromHome	Educational	EducationField	EmployeeCount	Gender	JobLevel	JobRole	MaritalStatus	MonthlyIncome	NumCompaniesWorked	Overtime	PercentSalaryHike	StandardHours
1	51	No	Travel_Rarely	Sales	6	2	Life Sciences	1	Female	1	Healthcare Representative	Married	\$ 131400	1	Y	11	
2	31	Yes	Travel_Frequently	Research & Development	10	1	Life Sciences	1	Female	1	Research Scientist	Single	\$ 41800	0	Y	23	
3	32	No	Travel_Frequently	Research & Development	17	4	Other	1	Male	4	Sales Executive	Married	\$ 153280	1	Y	15	
4	38	No	NonTravel	Research & Development	2	5	Life Sciences	1	Male	3	Human Resources	Married	\$ 83200	3	Y	11	
5	32	No	Travel_Rarely	Research & Development	10	1	Medical	1	Male	1	Sales Executive	Single	\$ 23420	4	Y	12	
6	46	No	Travel_Rarely	Research & Development	8	3	Life Sciences	1	Female	4	Research Director	Married	\$ 40700	3	Y	13	
7	28	Yes	Travel_Rarely	Research & Development	11	2	Medical	1	Male	2	Sales Executive	Single	\$ 56100	2	Y	20	
8	29	No	Travel_Rarely	Research & Development	18	3	Life Sciences	1	Male	2	Sales Executive	Married	\$ 31430	2	Y	22	
9	31	No	Travel_Rarely	Research & Development	1	3	Life Sciences	1	Male	3	Laboratory Technician	Married	\$ 20440	0	Y	21	
10	35	No	NonTravel	Research & Development	7	4	Medical	1	Female	4	Laboratory Technician	Divorced	\$ 136540	1	Y	13	
11	45	No	Travel_Rarely	Research & Development	17	2	Medical	1	Male	2	Laboratory Technician	Married	\$ 79510	0	Y	13	
12	36	No	Travel_Rarely	Research & Development	28	1	Life Sciences	1	Male	1	Laboratory Technician	Married	\$ 33770	0	Y	12	
13	55	No	Travel_Rarely	Research & Development	14	4	Life Sciences	1	Female	1	Sales Executive	Single	\$ 55380	0	Y	17	
14	47	Yes	NonTravel	Research & Development	1	1	Medical	1	Male	1	Research Scientist	Married	\$ 57600	1	Y	11	
15	28	No	Travel_Rarely	Research & Development	1	3	Life Sciences	1	Male	1	Manufacturing Director	Married	\$ 25920	1	Y	14	
16	37	No	Travel_Rarely	Research & Development	1	3	Life Sciences	1	Male	2	Healthcare Representative	Married	\$ 55460	4	Y	11	
17	21	No	Travel_Rarely	Research & Development	3	2	Life Sciences	1	Male	1	Laboratory Technician	Single	\$ 42190	1	Y	12	
18	37	No	NonTravel	Research & Development	1	3	Medical	1	Male	2	Sales Executive	Divorced	\$ 41270	2	Y	13	
19	35	No	Travel_Rarely	Sales	7	4	Life Sciences	1	Male	1	Sales Representative	Divorced	\$ 24380	7	Y	16	
20	38	No	Travel_Rarely	Research & Development	8	3	Life Sciences	1	Female	1	Manager	Divorced	\$ 68300	1	Y	11	
21	36	No	Travel_Frequently	Research & Development	1	4	Other	1	Male	2	Laboratory Technician	Divorced	\$ 104420	1	Y	18	
22	50	No	Travel_Rarely	Sales	8	4	Life Sciences	1	Male	1	Research Scientist	Divorced	\$ 96570	3	Y	23	
23	53	No	Travel_Rarely	Research & Development	11	4	Life Sciences	1	Female	2	Research Scientist	Married	\$ 21480	3	Y	11	
24	42	No	Travel_Rarely	Research & Development	4	4	Life Sciences	1	Male	1	Manufacturing Director	Married	\$ 89380	1	Y	14	
25	26	No	Travel_Frequently	Research & Development	16	4	Medical	1	Male	1	Laboratory Technician	Single	\$ 56190	1	Y	11	
26	55	No	Travel_Rarely	Research & Development	1	4	Other	1	Female	1	Research Scientist	Married	\$ 67990	3	Y	11	
27	26	No	Travel_Frequently	Research & Development	9	3	Life Sciences	1	Male	1	Manager	Married	\$ 162910	1	Y	22	
28	37	No	Travel_Rarely	Sales	5	1	Marketing	1	Male	1	Research Scientist	Single	\$ 27050	1	Y	11	
29	44	Yes	Travel_Frequently	Research & Development	1	2	Medical	1	Male	2	Research Scientist	Divorced	\$ 193200	3	Y	14	
30	38	No	Travel_Rarely	Sales	2	3	Marketing	1	Female	1	Manager	Divorced	\$ 44480	9	Y	12	
31	26	Yes	Travel_Rarely	Research & Development	4	3	Medical	1	Male	3	Research Scientist	Divorced	\$ 68340	2	Y	11	
32	38	No	Travel_Rarely	Research & Development	7	3	Other	1	Male	1	Human Resources	Single	\$ 96370	1	Y	13	
33	49	No	Travel_Frequently	Research & Development	1	1	Medical	1	Female	2	Research Scientist	Single	\$ 35910	9	Y	13	
34	36	No	Travel_Rarely	Sales	5	3	Technical Degree	1	Male	3	Sales Executive	Single	\$ 54050	4	Y	14	
35	31	No	Travel_Frequently	Research & Development	9	4	Medical	1	Male	1	Sales Executive	Divorced	\$ 45840	1	Y	16	
36	26	Yes	Travel_Rarely	Research & Development	8	3	Medical	1	Male	2	Manager	Single	\$ 157820	1	Y	12	
37	37	No	Travel_Frequently	Sales	9	1	Marketing	1	Male	1	Laboratory Technician	Married	\$ 15140	1	Y	14	
38	42	No	Travel_Frequently	Sales	2	2	Marketing	1	Male	3	Research Director	Married	\$ 25350	5	Y	13	
39	18	Yes	Travel_Rarely	Research & Development	1	4	Life Sciences	1	Male	1	Sales Executive	Single	\$ 33350	1	Y	14	
40	35	No	Travel_Rarely	Sales	20	2	Life Sciences	1	Male	1	Laboratory Technician	Married	\$ 51540	0	Y	19	
41	36	No	Travel_Frequently	Research & Development	8	3	Other	1	Female	3	Sales Executive	Married	\$ 69630	4	Y	12	

DATA QUESTIONS

10. In Power BI, create a line chart that visualizes the trend of Employee Attrition over the years at company.

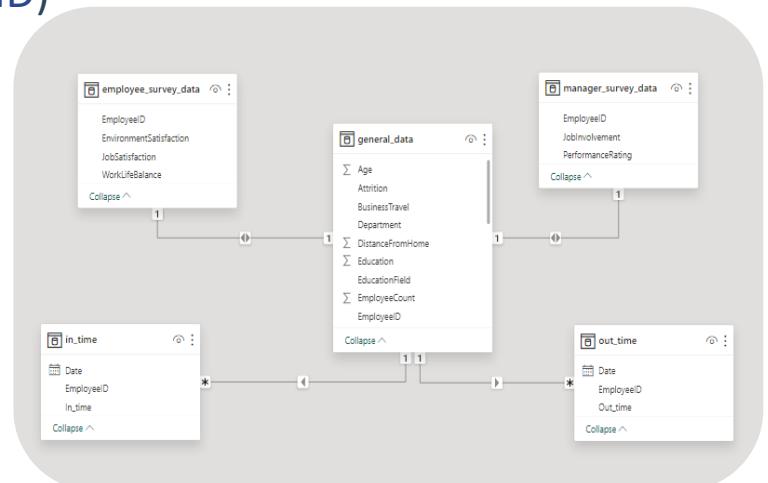


- Longer the employee stay in company lesser they leave and vice versa.

DATA QUESTIONS

11. Describe how you would create a star schema for this dataset, explaining the benefits of doing so.

- A star schema design where a central fact table ([General_data](#)) with required quantitative measures is connected to multiple dimension tables ([Employee_survey_data](#), [manager_survey_data](#), [in-time](#), and [out-time](#) data) through foreign key relationships. ([EmployeeID](#))
- Benefits of star schema:
 - Simplified data structure with easy understanding
 - Faster data retrieval
 - Effective definition of KPIs
 - Data consistency
 - Easy visualization and dashboard generation.



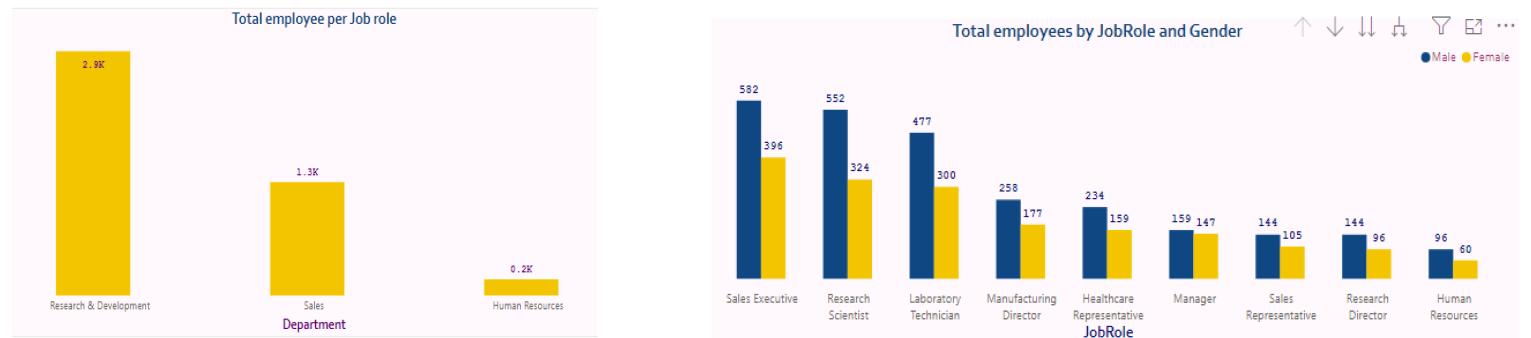
Star schema representation

DATA QUESTIONS

12. Create a hierarchy in Power BI that allows users to drill down from Department to Job Role to further narrow their analysis.

✓ general_data

- \sum Age
- Attrition
- BusinessTravel
- Department
- Department Hierarchy
 - Department
 - JobRole



- Using hierarchies enhances the user experience in Power BI by providing a more natural way to navigate through data and gain insights at different levels of detail.

DATA QUESTIONS

13. How can you set up parameterized queries in Power BI to allow users to filter data based on the Distance from Home column?

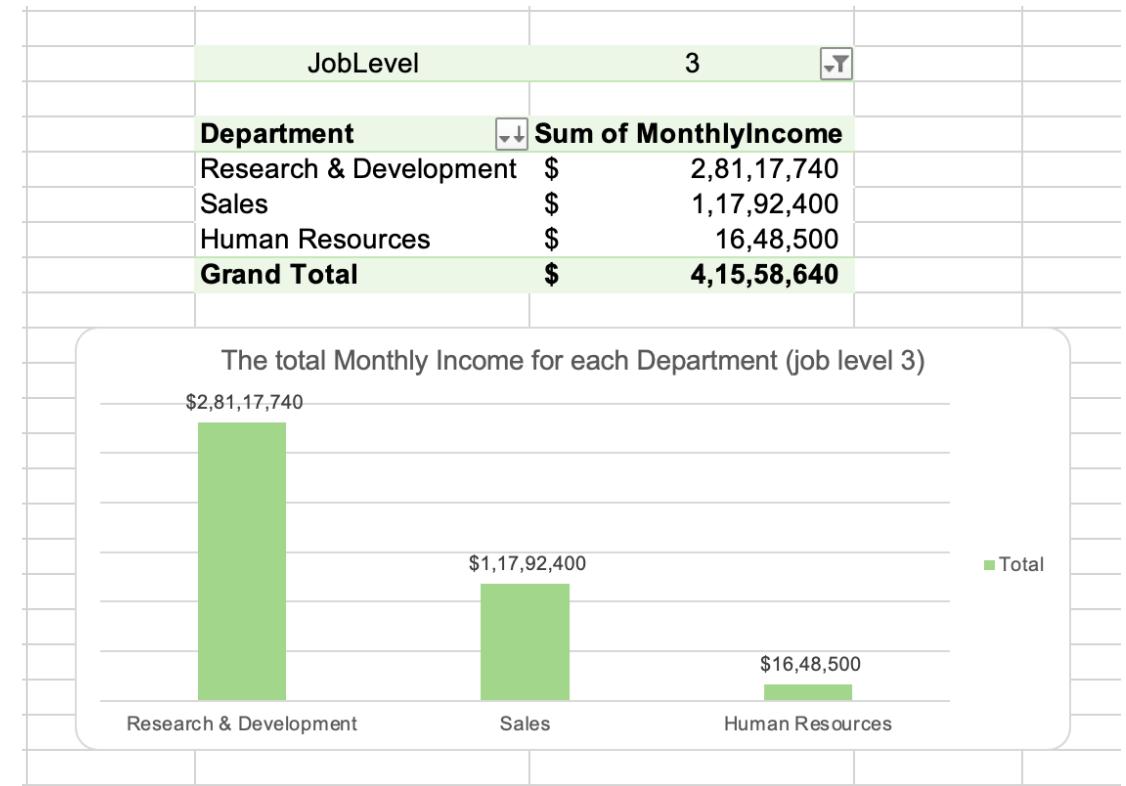
The screenshot shows the Power BI Advanced Editor interface. The top ribbon includes File, Home, Transform, Add Column, View, Tools, and Help. The main area displays a query named "general_data" which filters rows where the "DistanceFromHome" column is less than or equal to a parameter "Dist_p". The preview pane shows a table with columns: Attrition, BusinessTravel, Department, DistanceFromHome, and Education. The "DistanceFromHome" column has values ranging from 1 to 4. A parameter dialog box is open on the right, showing a parameter named "Distance" of type Whole Number with a current value of 4. The preview at the bottom indicates it was downloaded at 14:20.

- Open power query -> Manage Parameter -> New parameter -> create parameter
- Open advance editor -> add formula to filter data based on parameter created.

DATA QUESTIONS

14. In Excel, calculate the total Monthly Income for each Department, considering only the employees with a Job Level greater than or equal to 3.

- Research & development department has the highest sum of monthly income about \$2,81,17,740
- Human Resources department has the lowest sum of monthly income about \$ 16,48,500
- The summary highlight the varying contributions of different departments to the overall Monthly Income.



DATA QUESTIONS

15. Explain how to perform a What-If analysis in Excel to understand the impact of a 10% increase in Percent Salary Hike on Monthly Income.

- Calculate averages of **Monthly Income**, **Percent Salary Hike**, and **Salary with Hike**. ($=D2 * (1 + (D3)*0.01)$)
- Use the Scenario Manager in What-If Analysis from the Data tab.
- Add scenario for 10% increase, select changing cells to average percent salary hike.
- Enter scenario values as 25.21 ($15.21 + 10$) and click Ok.
- Create other scenarios if needed.
- Click summary → Scenario summary → set result cells to cell containing the formula. (D4)

	A	B	C	D
1	MonthlyIncome	PercentSalaryHike	Current	
2	131160		average of monthly income	65029
3	41890		average of percent salary hike	15.21
4	193280		average Salary with hike	74919.91
5	83210	11		
6	23420	12		
7	40710	13		

Scenario Summary			
Current Values:		10%increase	Sample 28.21% (13% increment)
Changing Cells:		\$D\$3	25.21
Result Cells:		\$D\$4	81422.8109
			83373.6809

DATA QUESTIONS

16. Verify if the data adheres to a predefined schema. What actions would you take if you find inconsistencies?

THE PROVIDED DATA ADHERES TO PREDEFINED SCHEMA

- The column headers matches the expected names in Schema.
- Data types in each column aligns with expected data types.
- All the expected columns are present in the data.
- No extra columns that are not part of predefined Schema are found
- No duplicates are found in column expected to be unique (employeeID)
- Verified every values in each column are valid.

IF INCONSISTENCIES PREVAILS

- would implement data validation rules to improve data integrity.
- Remove or update the incorrect values which are necessary for analysis
- Would delete irrelevant data from dataset and update datatype when needed.

DATA DASHBOARD

The following slide provides a glimpse of my dashboard.

The methods employed include the use of:

- slicers
- leveraging Power Query for customized results
- establishing a new parameter
- creating a new
- implementing custom formatting for visualizations
- incorporating basic DAX queries

Total Headcount

4410

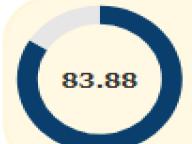
Employees



Total Attrition

711

Employees



Total Retention

3699

Employees

Average age of employees

36.92

years

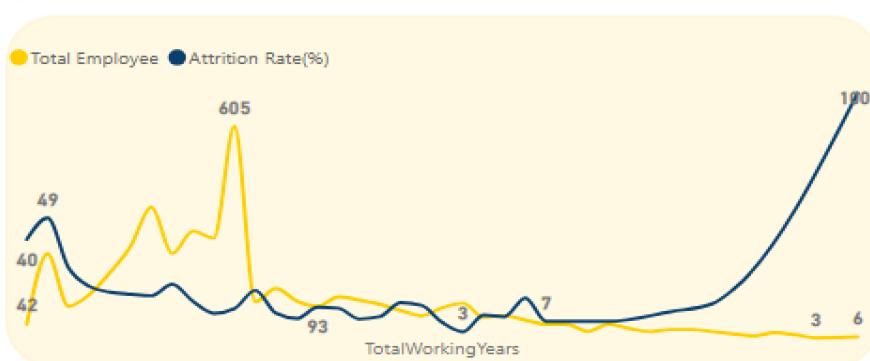
Average Monthly income

65.03K

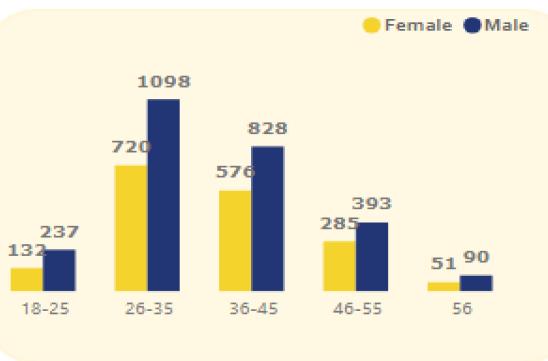
Female

EmployeeID	Age Bucket	Department	Education level	Gender	JobRole	Attrition
2	26-35	Research & Development	Below College	Female	Research Scientist	Yes
7	26-35	Research & Development	College	Male	Sales Executive	Yes
14	46-55	Research & Development	Below College	Male	Research Scientist	Yes
29	36-45	Research & Development	College	Male	Research Scientist	Yes
31	26-35	Research & Development	Bachelor	Male	Research Scientist	Yes
36	26-35	Research & Development	Bachelor	Male	Manager	Yes
39	18-25	Research & Development	Master	Male	Sales Executive	Yes
60	46-55	Research & Development	Below College	Female	Research Scientist	Yes
66	26-35	Research & Development	Master	Male	Sales Executive	Yes

Attrition Trends: by Years at company & Total working years (drill down)



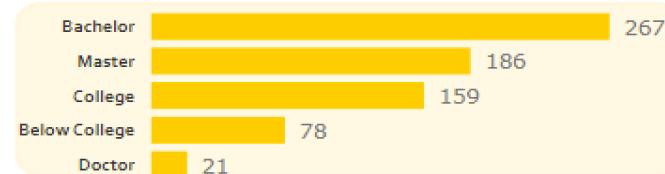
Total Attrition: by Employees Age group & Gender



Overview of survey on satisfaction & performance

Attribute	1	2	3	4
EnvironmentSatisfaction	19.27%	19.52%	30.79%	30.42%
JobInvolvement	5.65%	25.51%	59.05%	9.80%
JobSatisfaction	19.59%	19.13%	30.14%	31.14%
PerformanceRating			84.63%	15.37%
WorkLifeBalance	5.47%	23.31%	60.84%	10.38%

Total Attrition: by Employee Education



Total Attrition: by Travel Distance from home



THANK YOU

“

Thank you, PSYLIQ, for the invaluable opportunity for providing me with the enriching opportunity to undertake an internship focused on HR data analysis. Throughout this experience, I have had the privilege of working with essential tools such as MS-Excel and Power BI. What sets this internship apart is the acquisition of new skills, particularly in What-If Analysis, Power Query, and Power BI.

”