HR ANALYSIS DASHBOARD

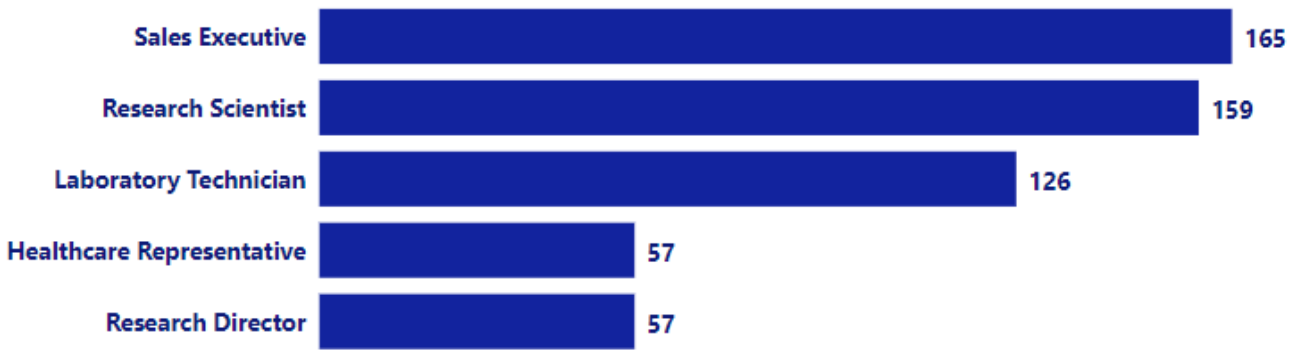
Average Years with Current Manager	Average Distance From Home	Average Years at Company	Average Monthly Income
4	9	7	65K

Gender
- Female
- Male

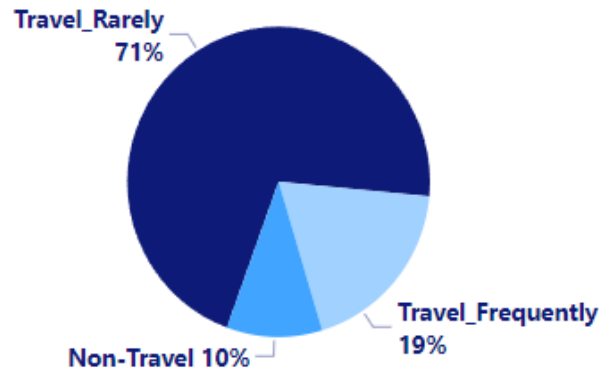
Marital Status
- Divorced
- Married
- Single

Education Field
- Human Resources
- Life Sciences
- Marketing
- Medical
- Other
- Technical Degree

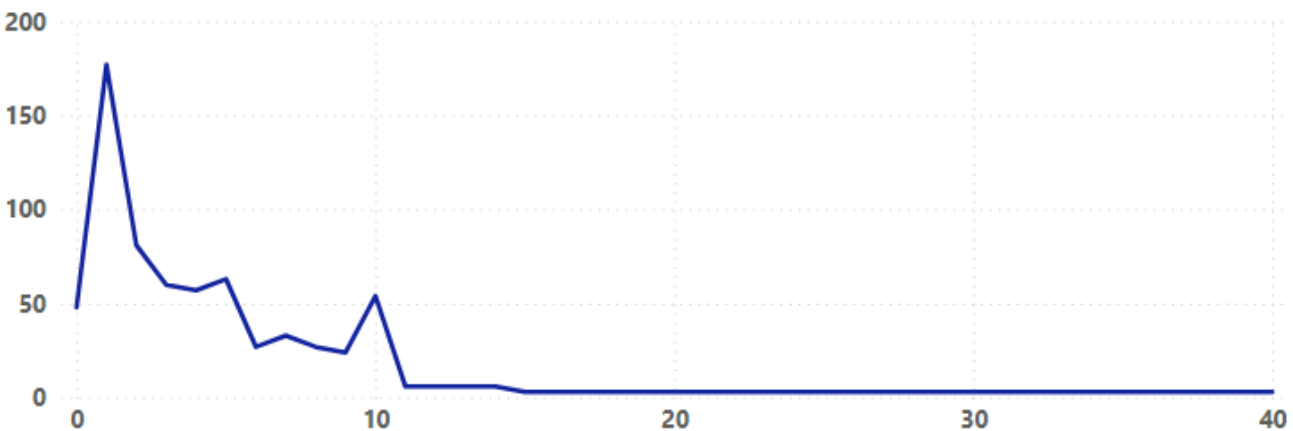
Attrition by Job Role



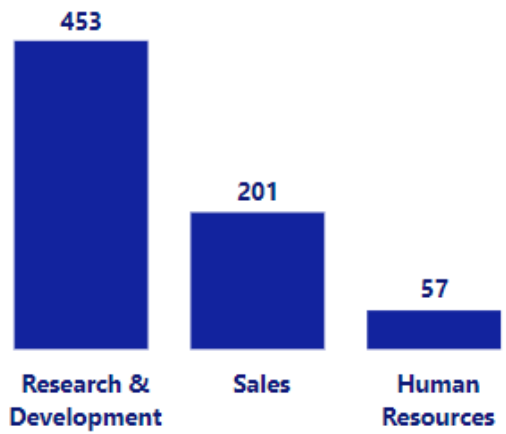
Attrition by Business Travel

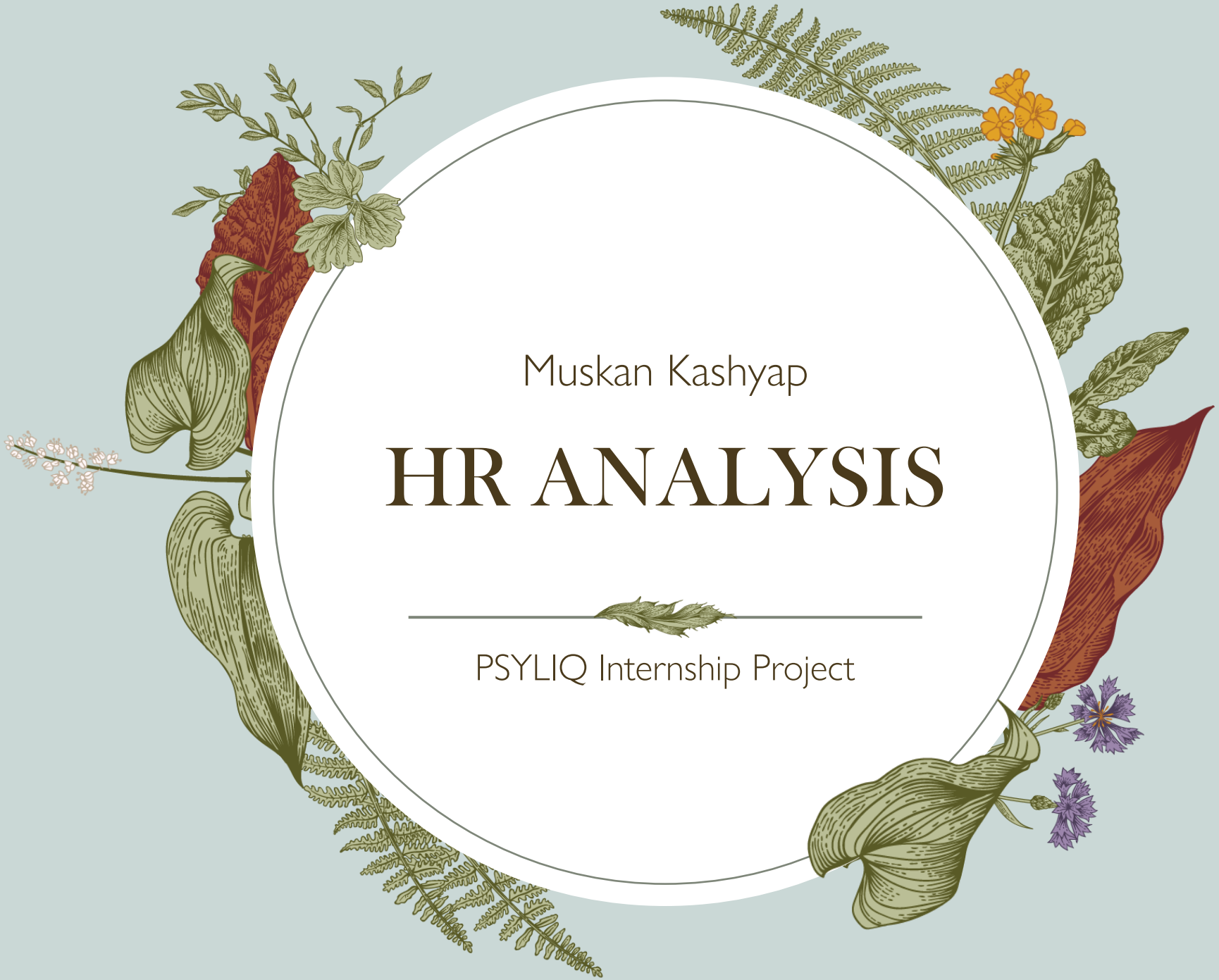


Attrition of Employees Over the years spend at company



Attrition by Department





Muskan Kashyap

HR ANALYSIS

PSYLIQ Internship Project

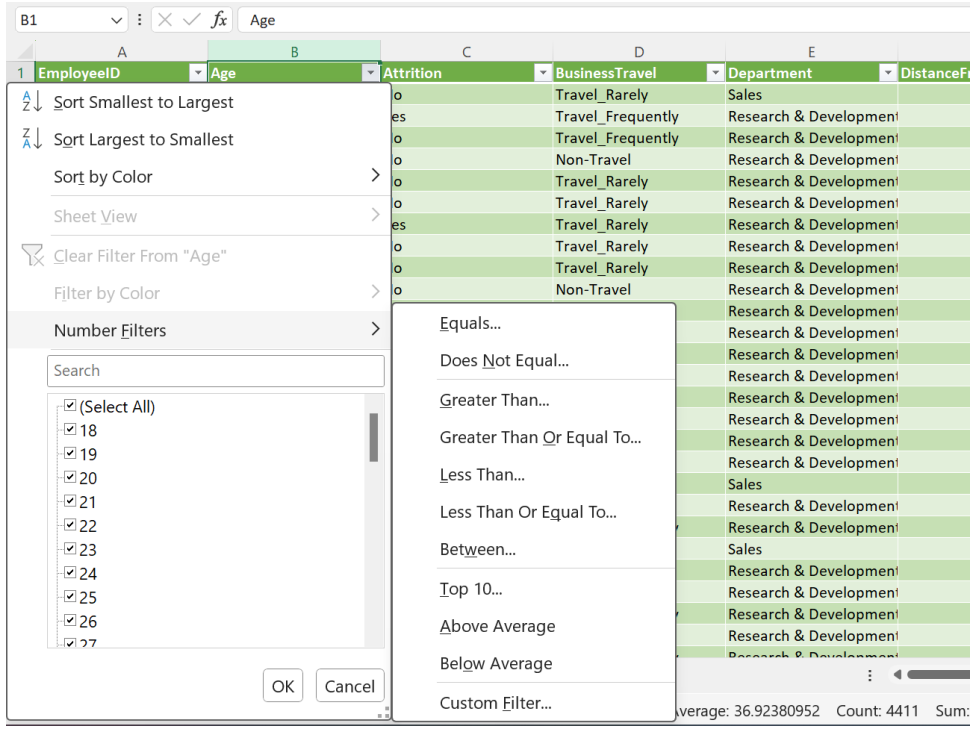
Introduction

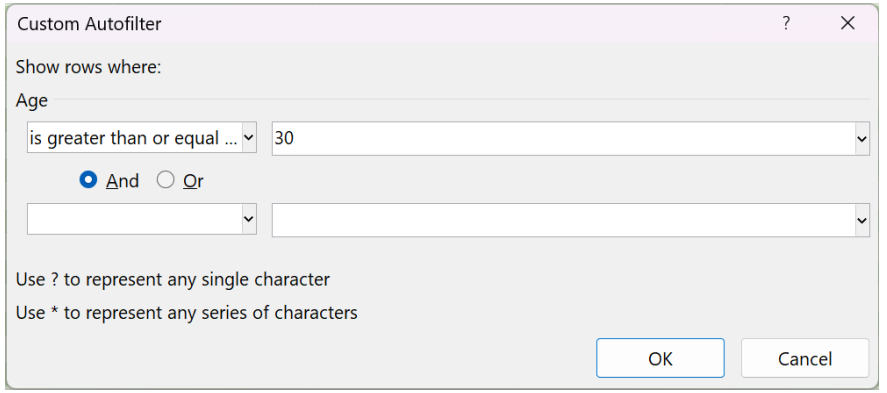
In this presentation, I'll walk you through a comprehensive project involving diverse data tasks, from creating pivot tables, crafting dynamic charts in Excel to creating dashboard in Power BI. I've explored key HR questions in a dataset of 4400+ employees, addressing various topics.

Project Questions

And Solutions

Q1: Using Excel, how would you filter the dataset to only show employees aged 30 and above?





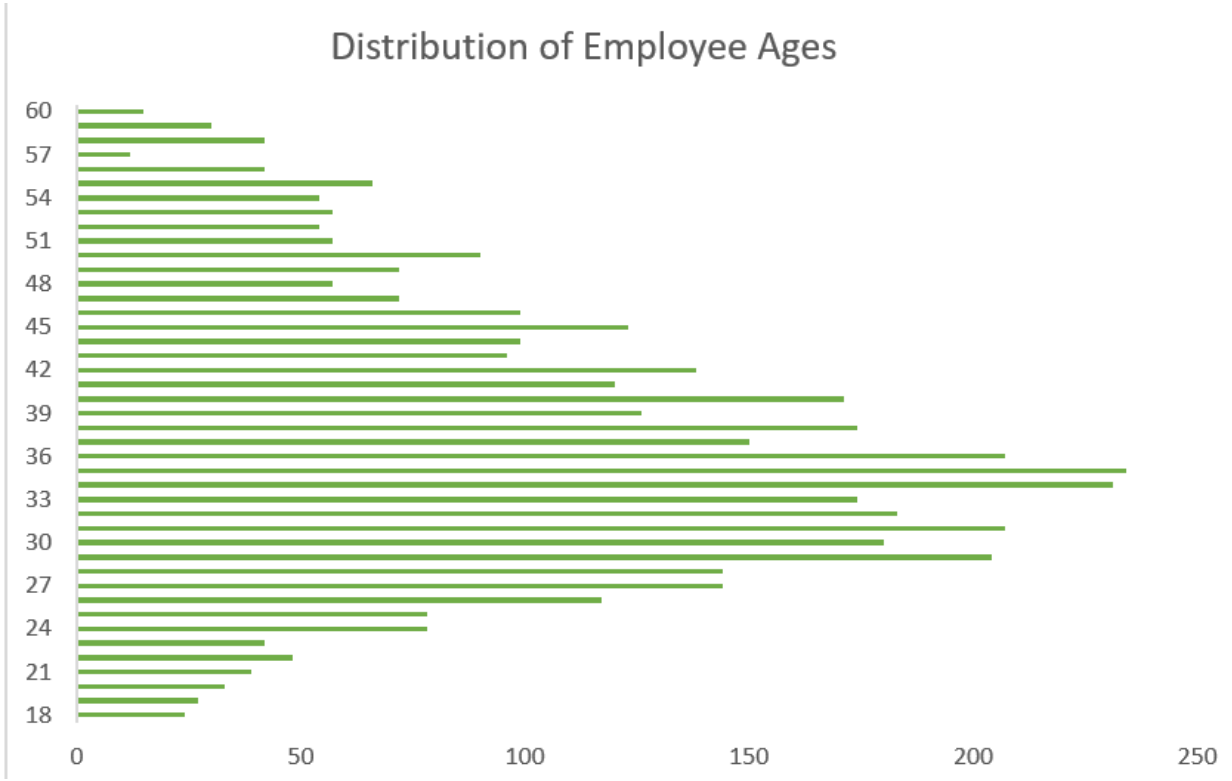
Q2: Create a pivot table to summarize the average Monthly Income by Job Role.

Job Role	Average Monthly Income
Healthcare Representative	60983.7
Human Resources	58528.1
Laboratory Technician	66314.1
Manager	63395.9
Manufacturing Director	69183.7
Research Director	65473.1
Research Scientist	64975.7
Sales Executive	65186.7
Sales Representative	65371.0

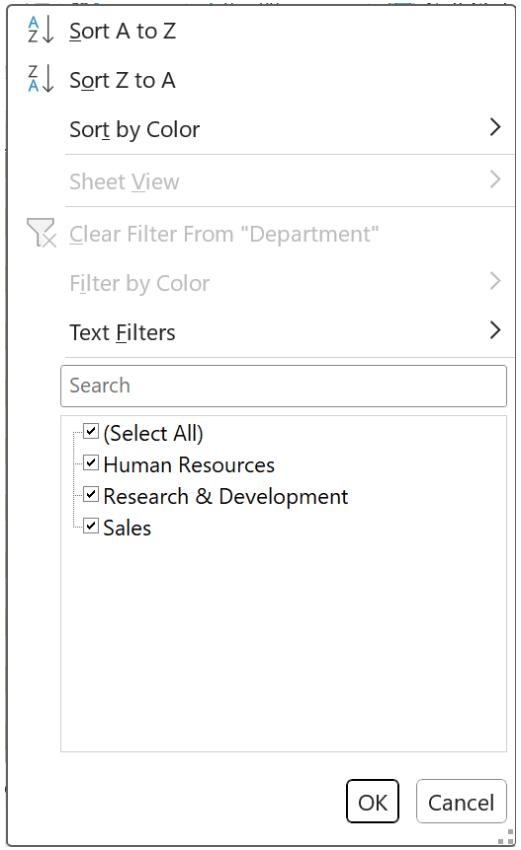
Q3: Apply conditional formatting to highlight employees with Monthly Income above the company's average income.

JobLevel	JobRole	MaritalStatus	MonthlyIncome	NumCompaniesWorke
4	Sales Executive	Married	**193280**	1
3	Human Resources	Married	**83210**	3
1	Sales Executive	Single	23420	4
4	Research Director	Married	40710	3
2	Sales Executive	Single	58130	2
2	Sales Executive	Married	31430	2
3	Laboratory Technician	Married	20440	0
4	Laboratory Technician	Divorced	**134640**	1
2	Laboratory Technician	Married	**79910**	0
1	Laboratory Technician	Married	33770	0
1	Sales Executive	Single	55380	0
1	Research Scientist	Married	57620	1
1	Manufacturing Director	Married	25920	1
2	Healthcare Representativ	Married	53460	4
1	Laboratory Technician	Single	42130	1
2	Sales Executive	Divorced	41270	2
1	Sales Representative	Divorced	24380	7
1	Manager	Divorced	**68700**	1
2	Laboratory Technician	Divorced	**104470**	1
1	Research Scientist	Divorced	**96670**	3
2	Research Scientist	Married	21480	3

Q4: Create a bar chart in Excel to visualize the distribution of employee ages.

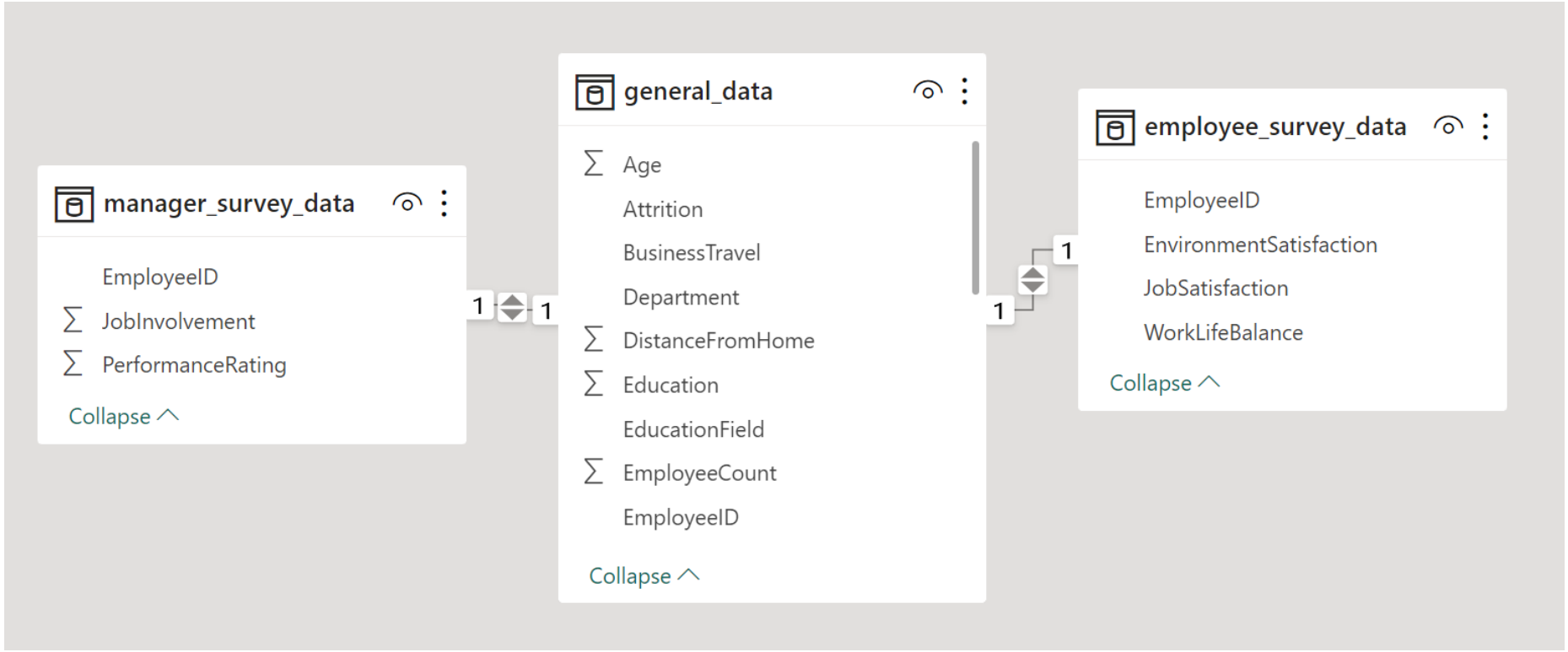


Q5: Identify and clean any missing or inconsistent data in the "Department" column



NO INCONSISTENT DATA

Q6: In Power BI, establish a relationship between the "EmployeeID" in the employee data and the "EmployeeID" in the other data.



Q7: Using DAX, create a calculated column that calculates the average years an employee has spent with their current manager.

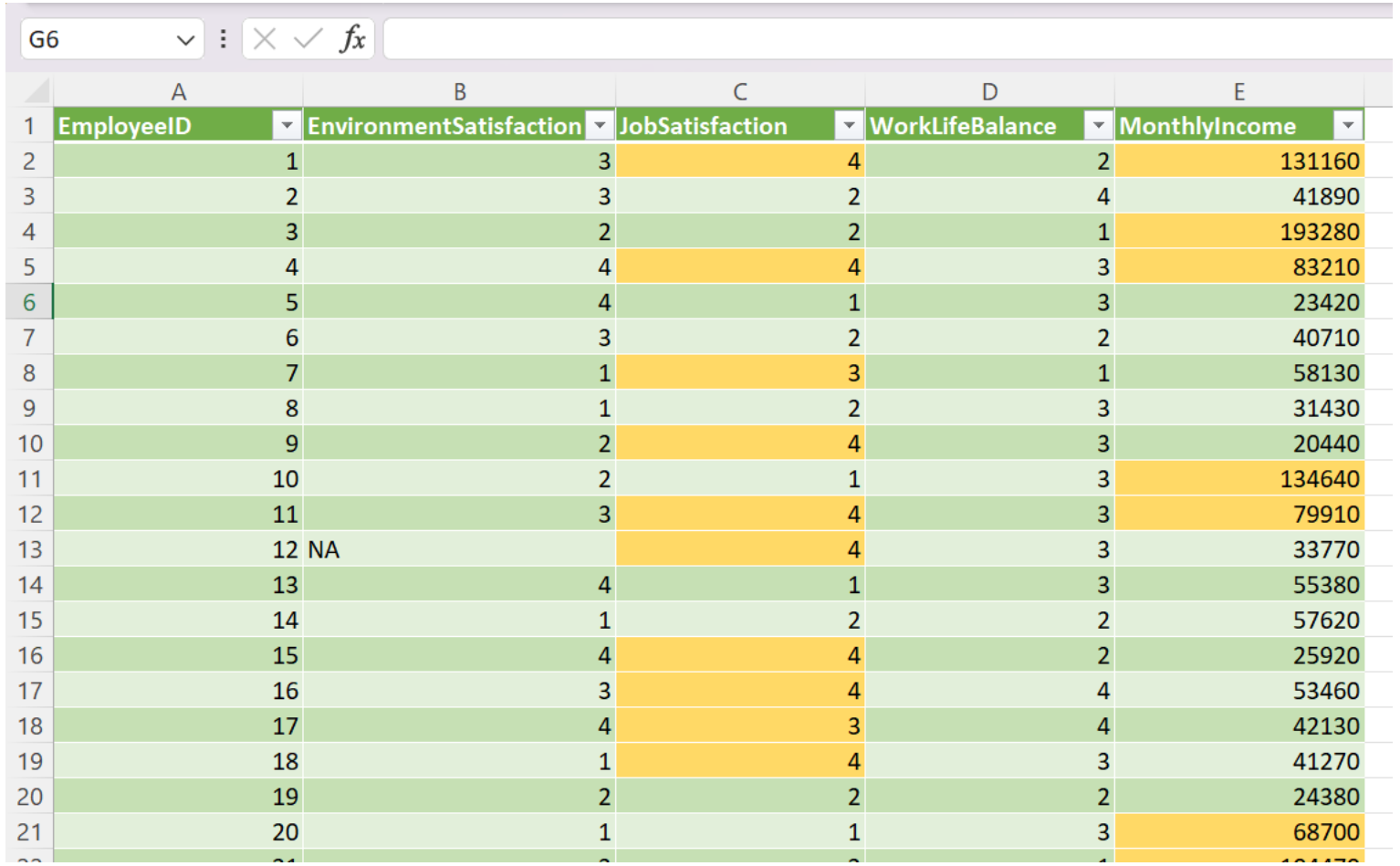
```
1  Average_working_year = AVERAGE(general_data[YearsWithCurrManager])
```

Average working years
4.12

Q8: Using Excel, create a pivot table that displays the count of employees in each Marital Status category, segmented by Department.

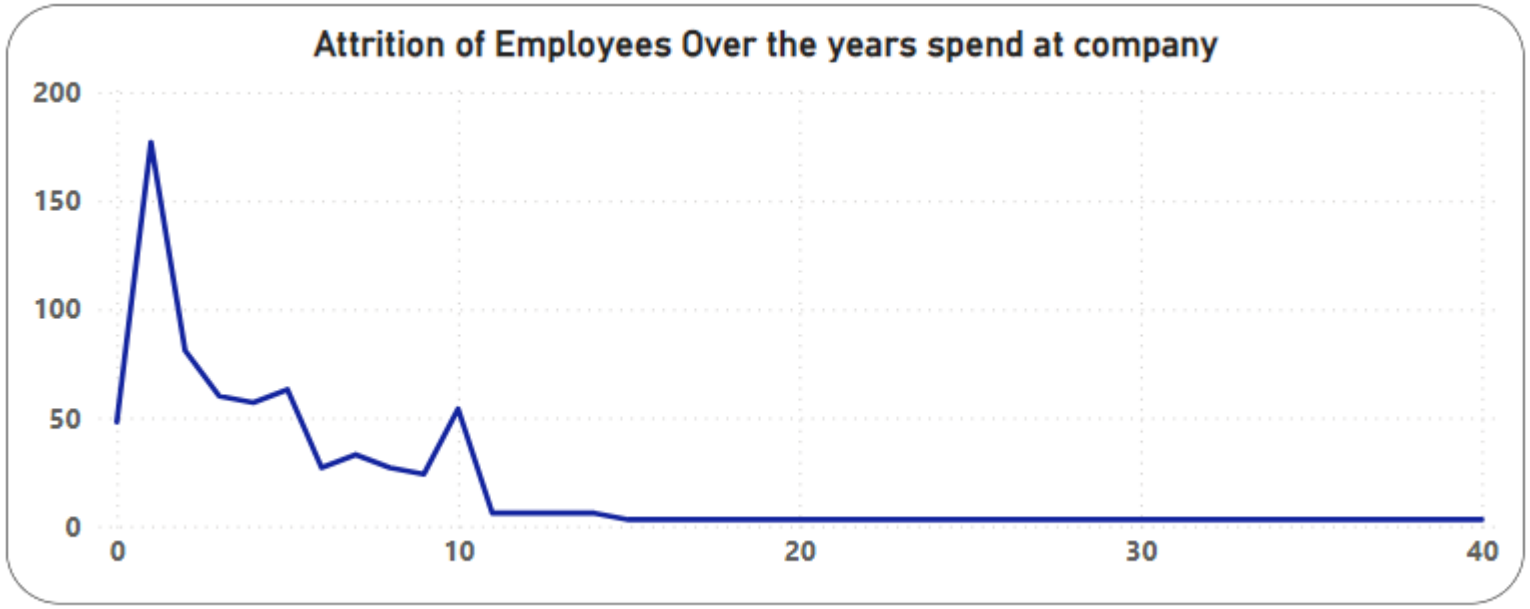
Department	Employee cpunt
Human Resources	189
Divorced	21
Married	96
Single	72
Research & Development	2883
Divorced	621
Married	1350
Single	912
Sales	1338
Divorced	339
Married	573
Single	426

Q9: Apply conditional formatting to highlight employees with above-average Monthly Income or above-average Job Satisfaction.



	A	B	C	D	E
1	EmployeeID	EnvironmentSatisfaction	JobSatisfaction	WorkLifeBalance	MonthlyIncome
2	1	3	4	2	131160
3	2	3	2	4	41890
4	3	2	2	1	193280
5	4	4	4	3	83210
6	5	4	1	3	23420
7	6	3	2	2	40710
8	7	1	3	1	58130
9	8	1	2	3	31430
10	9	2	4	3	20440
11	10	2	1	3	134640
12	11	3	4	3	79910
13	12	NA	4	3	33770
14	13	4	1	3	55380
15	14	1	2	2	57620
16	15	4	4	2	25920
17	16	3	4	4	53460
18	17	4	3	4	42130
19	18	1	4	3	41270
20	19	2	2	2	24380
21	20	1	1	3	68700

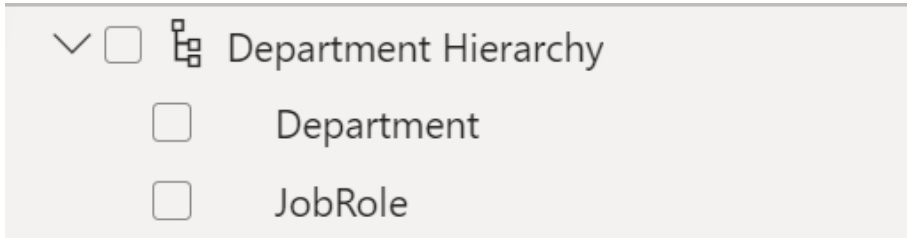
Q10: In Power BI, create a line chart that visualizes the trend of Employee Attrition over the years



Q11: Using DAX, calculate the rolling 3-month average of Monthly Income for each employee.

```
Rolling3MonthAverage =
CALCULATE(
    AVERAGEX(
        FILTER(
            general_data,
            general_data[EmployeeID] =
EARLIER(general_data[EmployeeID]) &&
            general_data[YearsAtCompany] <=
EARLIER(general_data[YearsAtCompany]) &&
            general_data[YearsAtCompany] >
EARLIER(general_data[YearsAtCompany]) - 0.25
        ),
        general_data[MonthlyIncome]
    )
)
```

Q12: Create a hierarchy in Power BI from Department to Job Role



Q13: How can you set up parameterized queries in Power BI to allow users to filter data based on the Distance from Home column?

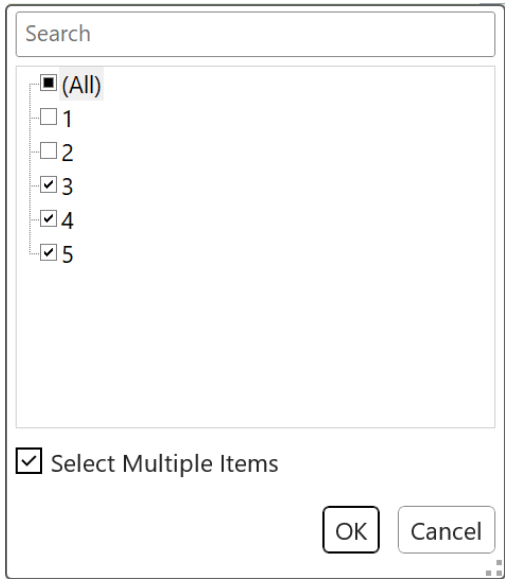
To set up parameterized queries in Power BI for filtering data based on the "Distance from Home" column:

1. Click on "Transform data" to open Power Query Editor.
2. In Power Query Editor, click on "Manage Parameters" in the "Home" tab.
3. Create a new parameter, for example, "DistanceParameter," and set its data type (like Decimal or Whole Number).
4. Close the "Manage Parameters" window and go back to the data view.
5. In the filter for the "Distance from Home" column, replace a constant value with the created parameter like "is less than or equal to DistanceParameter."
6. Go back to the report view, and you'll see a new parameter in the right pane.
7. Users can now adjust the parameter to filter data based on different distances from home.

Q14: In Excel, calculate the total Monthly Income for each Department, considering only the employees with a Job Level greater than or equal to 3.

JobLevel	(Multiple Items)

Row Labels	Sum of MonthlyIncome
Human Resources	3259140
Research & Development	53502900
Sales	22974330



Q15: Create a new column in Excel to show the impact of a 10% increase in Percent Salary Hike on Monthly Income.

	EmployeeID	MonthlyIncome	PercentSalaryHike	New Monthly income
2	1	131160	11	=[@MonthlyIncome]*(1+[@PercentSalaryHike])
3	2	41890	23	
4	3	193280	15	
5	4	83210	11	
6	5	23420	12	
7	6	40710	13	
8	7	58130	20	
9	8	31430	22	
10	9	20440	21	
11	10	134640	13	
12	11	79910	13	
13	12	33770	12	
14	13	55380	17	
15	14	57620	11	
16	15	25920	14	
17	16	53460	11	
18	17	42130	12	
19	18	41270	13	
20	19	24380	16	
21	20	68700	11	

	A	B	C	D
1	EmployeeID	MonthlyIncome	PercentSalaryHike	New Monthly income
2	1	131160	11	1573920
3	2	41890	23	1005360
4	3	193280	15	3092480
5	4	83210	11	998520
6	5	23420	12	304460
7	6	40710	13	569940
8	7	58130	20	1220730
9	8	31430	22	722890
10	9	20440	21	449680
11	10	134640	13	1884960
12	11	79910	13	1118740
13	12	33770	12	439010
14	13	55380	17	996840
15	14	57620	11	691440
16	15	25920	14	388800
17	16	53460	11	641520
18	17	42130	12	547690
19	18	41270	13	577780
20	19	24380	16	414460
21	20	68700	11	824400

Thank you

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