

(By Group 6)

Welcome



PROJECT NAME : HR ANALYTICS (Employee Retention)

PROJECT MEMBERS :

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AGENDA :



INTRODUCTION &
PROBLEM
STATEMENT



BUSINESS
OBJECTIVE



KPIS



DASHBOARD

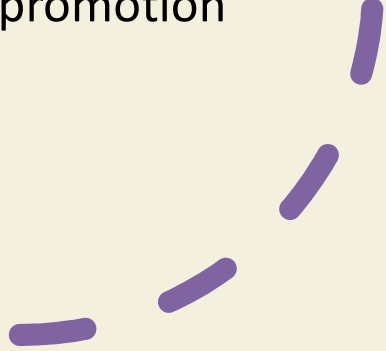


CONCLUSION

Introduction:

HR analytics involves the collection and analysis of HR-related data, including employee data, performance metrics, and other relevant data points. By using advanced analytical tools and techniques, HR analytics provides valuable insights into HR processes and trends, enabling organizations to make more informed decisions about their employees and improve overall performance.

Problem Statement:

- Average attrition rate for all Departments
 - Average hourly rate of Male Research Scientist
 - Attrition rate Vs Monthly Income stats
 - Average working years for each Department
 - Job role Vs Work life balance
 - Attrition rate Vs Years Since last promotion
- 

Business Objective:

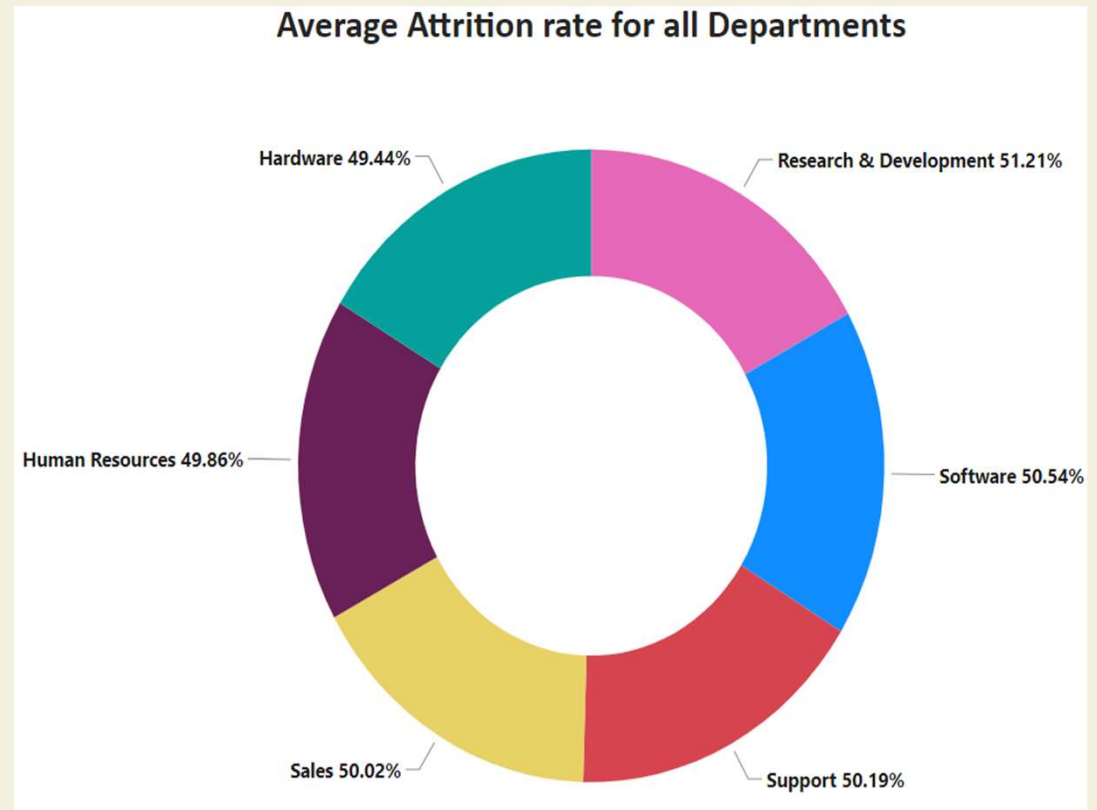
The aim of this project is to analyze employee retention and attrition rates with the organization and provide insights to the HR team for developing effective retention strategies. Through data analysis and visualizations, we will identify factors that contribute to :

- ✓ Employee turnover and attrition.
- ✓ Evaluate the effectiveness of existing retention strategies.
- ✓ To verify the satisfaction level of employee in the organization.
- ✓ Provide recommendations to improve employee retention.

KPI 1

Average Attrition rate for all Departments

This KPI is to find out the relationship between each department and its attrition rate and here attrition rate is highest for Research and Development Department whereas lowest for Hardware Department.



```



CREATE TABLE hr AS
SELECT *
FROM hr_1
JOIN hr_2
ON hr_1.EmployeeNumber = hr_2.`Employee ID`;

select * from hr;

----- # Average Attrition rate for all Departments -----

SELECT Department,
       CONCAT(FORMAT(COUNT(CASE WHEN Attrition = 'Yes' THEN 1 END) / COUNT(*) *100, 2), '%')
       as Attrition_Rate
FROM hr
GROUP BY Department;

```

Result Grid   Filter Rows: <input type="text"/>		
	Department	Attrition_Rate
▶	Research & Development	51.21%
	Software	50.54%
	Support	50.19%
	Sales	50.02%
	Human Resources	49.86%
	Hardware	49.44%

Insights from KPI 1:

We can clearly say that attrition rate of employees for every department is almost 50% which indicates that attrition rate of employees does not depend on department. So, irrespective of the department almost 50% of employees are leaving the company.

From this calculation and visualization we concluded that we must make strong strategies to minimize attrition rate and improve our company's Employee retention so that we can balance the company's growth and right talent.

KPI 2

Average Hourly rate of Male Research Scientist

Insights from KPI 2 :

This KPI is to find out the average hourly rate of male research scientists which is 114.45.

Average Hourly rate of Male Research Scientist

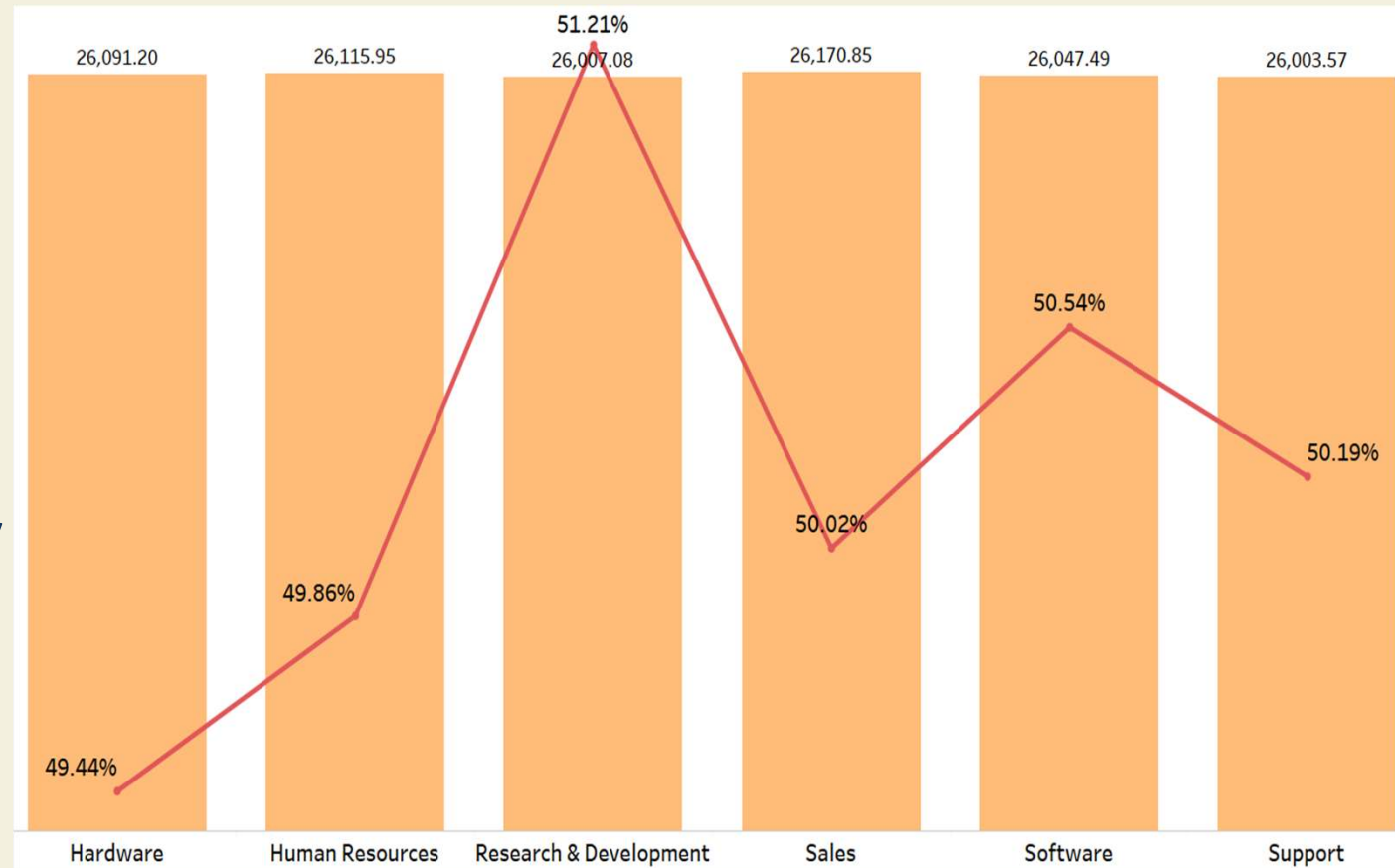
114.45



Metric	Value
Average Hourly rate of Male Research Scientist	114.45

KPI 3 Attrition Rate Vs Monthly Income Stats

This KPI is to find out the relation the between monthly income and Attrition rate.




```

SELECT Department, FORMAT(AVG(CASE WHEN Attrition = 'Yes' THEN MonthlyIncome END), 2)
AS Avg_Monthly_Income,
CONCAT(FORMAT(COUNT(CASE WHEN Attrition = 'Yes' THEN 1 END) / COUNT(*) *100, 2), '%')
AS Attrition_Rate
FROM hr
GROUP BY Department;

```

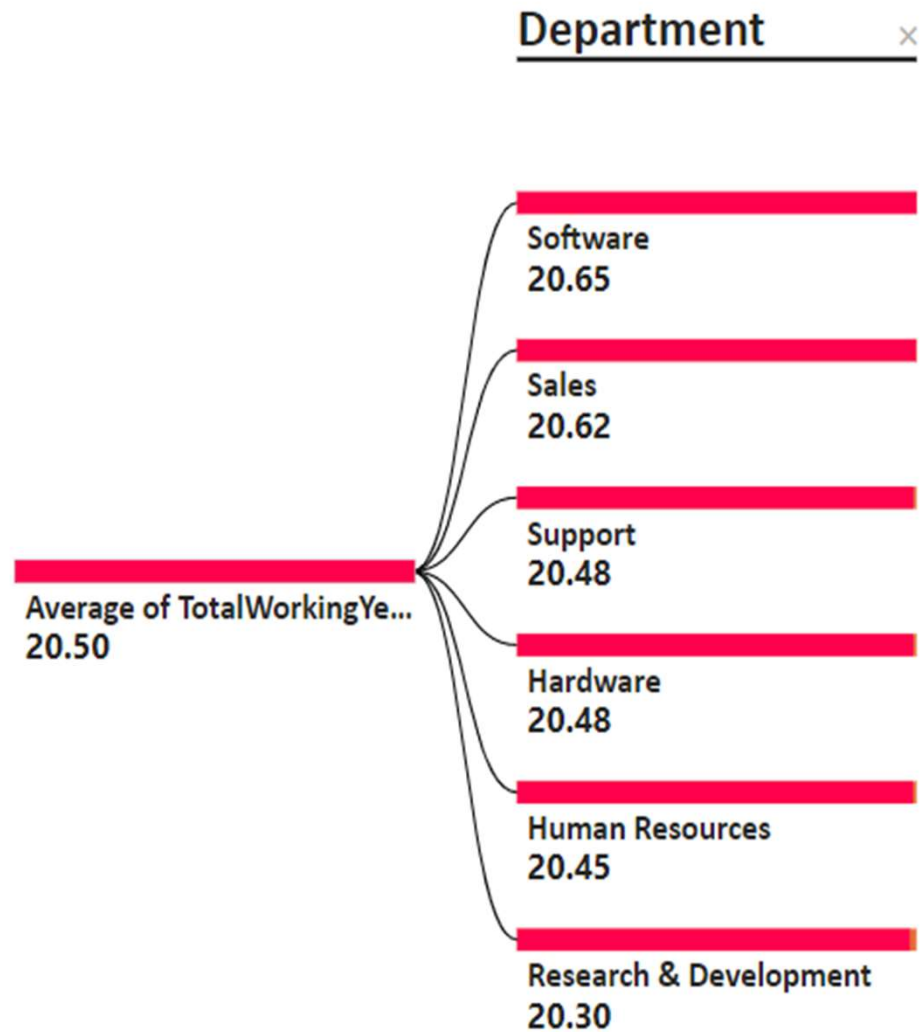
Insights from KPI 3:

Based on our analysis and visualization, it is evident that the Hardware Department has the lowest attrition rate of 49.44%, with an average monthly income of Rs. 26,091.20. On the other hand, the Research and Development Department has the highest attrition rate of 51.21%, with an average monthly income of Rs. 26,007.08

Result Grid			
Filter Rows: <input type="text"/>			
Export: 			
	Department	Avg_Monthly_Income	Attrition_Rate
▶	Hardware	26,091.20	49.44%
	Support	26,003.57	50.19%
	Sales	26,170.85	50.02%
	Research & Development	26,007.08	51.21%
	Software	26,047.49	50.54%
	Human Resources	26,115.95	49.86%

KPI 4

Average Working Years for each Department



```
SELECT Department, AVG(TotalWorkingYears) as Avg_Working_Years
FROM hr
GROUP BY Department;
```

Result Grid			Filter Rows:
	Department	Avg_Working_Years	
►	Software	20.6453	
	Sales	20.6178	
	Support	20.4845	
	Hardware	20.4794	
	Human Resources	20.4537	
	Research & Development	20.2985	

Insights from KPI 4:

From this we can see the average working years in software department is high as compared to the rest of the departments and lowest is for Research & Development Department.

From the analysis we can conclude that average working years is approximately 20 for all the departments.

**KPI 5
Job Role
Vs
Work Life Balance
for Total
Employees**

Job Role Vs Work Life Balance					
JobRole	1-Poor	2-Fair	3-Good	4-Excellent	Total
Developer	1215	1225	1326	1219	4985
Healthcare Representative	1233	1272	1291	1249	5045
Human Resources	1232	1222	1226	1248	4928
Laboratory Technician	1245	1229	1222	1216	4912
Manager	1242	1282	1281	1231	5036
Manufacturing Director	1185	1347	1204	1238	4974
Research Director	1272	1256	1239	1257	5024
Research Scientist	1222	1257	1286	1259	5024
Sales Executive	1286	1330	1219	1218	5053
Sales Representative	1255	1264	1241	1259	5019
Total	12387	12684	12535	12394	50000

```

SELECT
  IFNULL(JobRole, 'Total') AS JobRole,
  COUNT(CASE WHEN WorkLifeBalance = 1 THEN 1 END) AS Poor_1,
  COUNT(CASE WHEN WorkLifeBalance = 2 THEN 1 END) AS Fair_2,
  COUNT(CASE WHEN WorkLifeBalance = 3 THEN 1 END) AS Good_3,
  COUNT(CASE WHEN WorkLifeBalance = 4 THEN 1 END) AS Excellent_4,
  COUNT(*) AS Total_Count
FROM hr
GROUP BY JobRole WITH ROLLUP;

```

Result Grid Filter Rows: Export: Wrap Cell Content:						
	JobRole	Poor_1	Fair_2	Good_3	Excellent_4	Total_Count
▶	Developer	1215	1225	1326	1219	4985
	Healthcare Representative	1233	1272	1291	1249	5045
	Human Resources	1232	1222	1226	1248	4928
	Laboratory Technician	1245	1229	1222	1216	4912
	Manager	1242	1282	1281	1231	5036
	Manufacturing Director	1185	1347	1204	1238	4974
	Research Director	1272	1256	1239	1257	5024
	Research Scientist	1222	1257	1286	1259	5024
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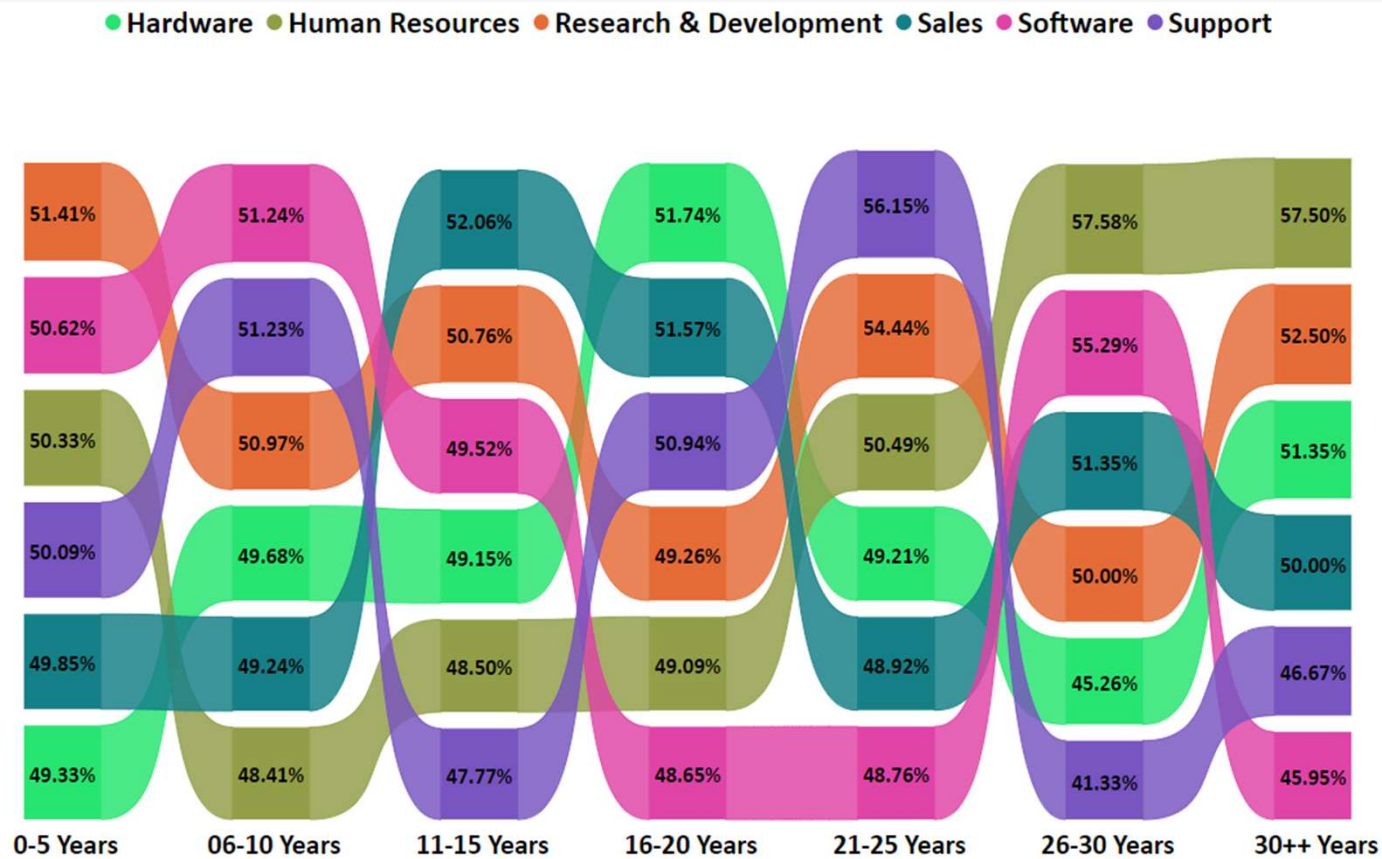
Insights from KPI 5:

For Research Scientists, Healthcare representatives and Developers have good work life balance also for human resources the work life balance is excellent.

For the Sales representatives, managers, Manufacturing Directors and the Sales executives have fair work life balance.

From the analysis we can conclude that for Research directors and the laboratory technicians have poor work life balance.

KPI 6 Attrition Rate Vs Years Since Last Promotion



Insights from KPI 6:

From the analysis and Visualisation we find out that

For 0-5 years since Last year Promotion interval Research & Development and Hardware departments has highest and lowest attrition rate respectively.

For 6-10 years since last year promotion interval Human resources and software departments has highest and lowest attrition rate respectively.

For 11-15 years since last promotion interval support and sales departments has highest and lowest attrition rate respectively.

For 16-20 years since last promotion interval software & hardware departments has highest and lowest attrition respectively.

For 21-25 years since last promotion interval software and support departments has highest and lowest attrition respectively.

For 26-30 years since last promotion interval support and Human resources departments has highest and lowest attrition respectively.

For above 30 years since last promotion interval software and Human resources departments has highest and lowest attrition respectively.

POWER BI DASHBOARD

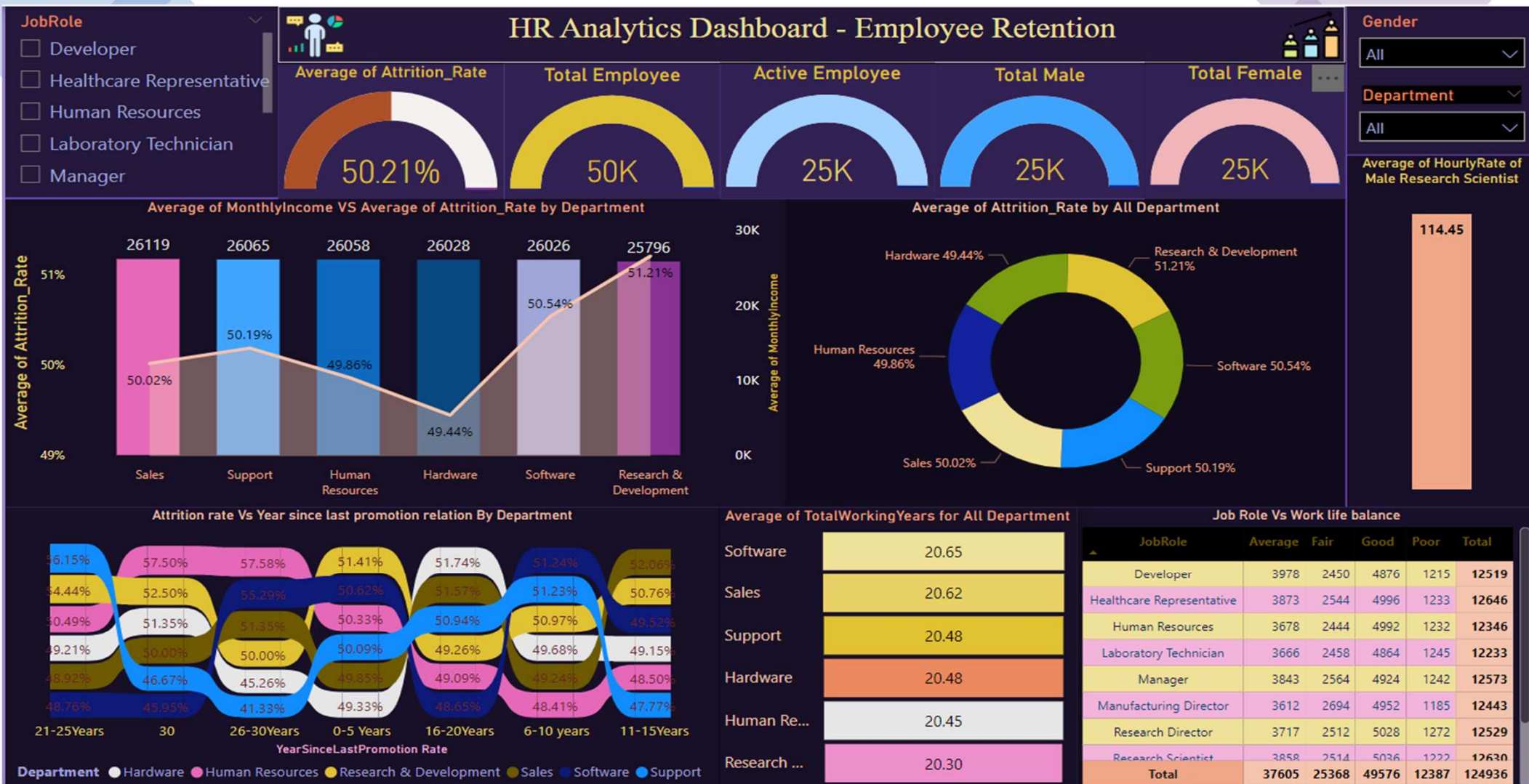
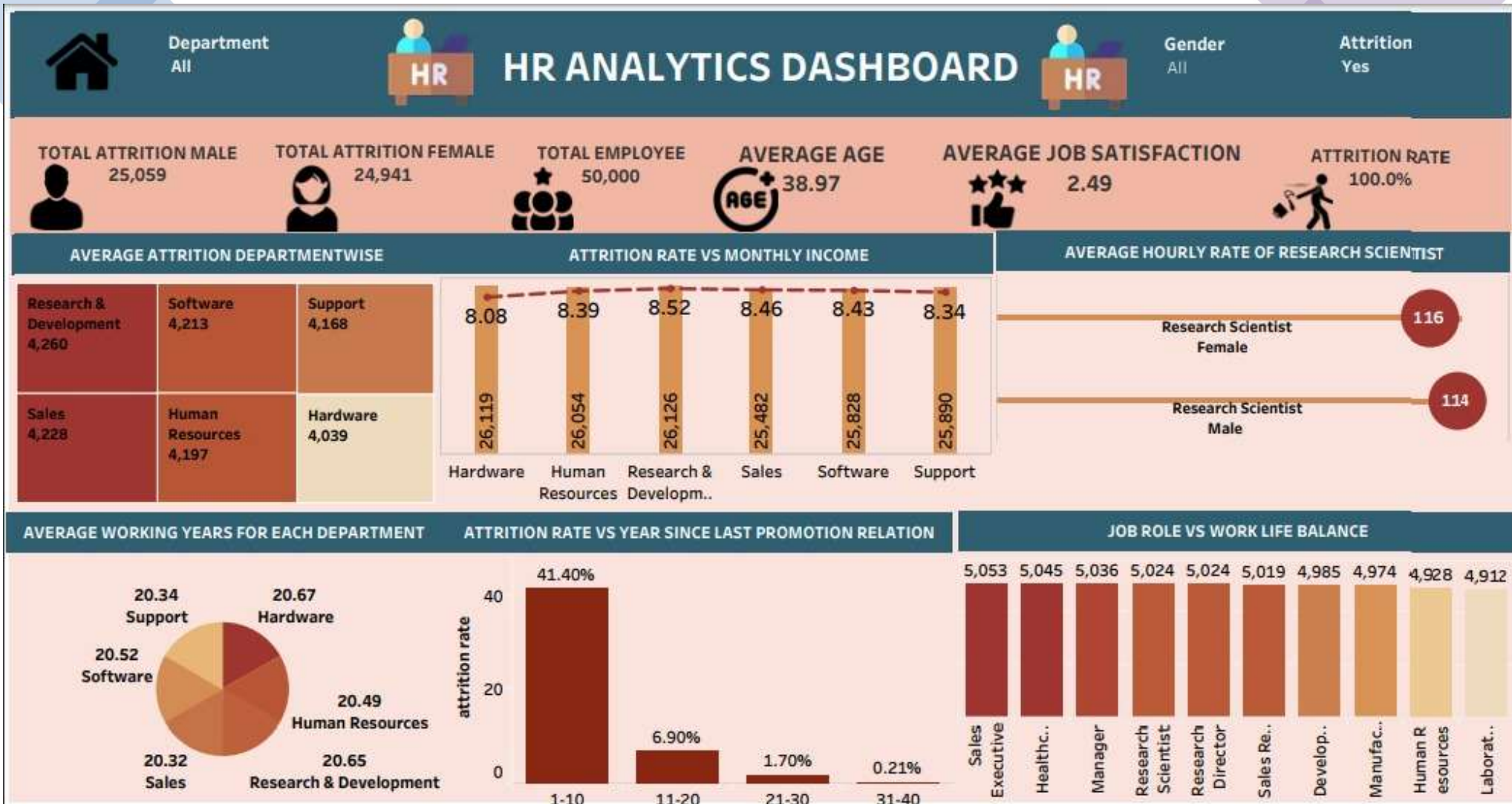


TABLEAU DASHBOARD



EXCEL DASHBOARD



Conclusion :



Conduct stay interviews: Instead of exit interviews, conduct stay interviews with employees to gather feedback about the job.



Improve employee engagement: Implement initiatives to improve employee engagement, such as regular feedback, recognition and rewards programs, and opportunities for career growth.



Address workload issues: Ensure employees have manageable workloads by regularly monitoring and adjusting workloads to prevent burnout and overwhelm.



Create a positive work environment: Foster a positive work environment by promoting a culture of respect, inclusivity, and teamwork. Encourage open communication and collaboration among employees.



Address pay and compensation issues: Ensure that employees receive fair pay and compensation for their work and to find out what motivates an employee to continue to work in an organization.

PROJECT NAME :

**HR ANALYTICS
(Employee Retention)**

Thank You 🙏

