Assessment of Employees

QuantSpark

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General Overview

The dataset is composed of 14.999 records.

As we can see from the pie chart, the company has a high resignation level with the cluster of low salary employees with over 60%, followed by medium salary and just a small part of high salary employees with 2.3%.

Number of employeers by Salary

left	high	low	medium	Total
0	1155	5144	5129	11428
1	82	2172	1317	3571
Total	1237	7316	6446	14999

0 = current employees
1 = left the company

Percentage of Resignation by Salary

Salary
- low
- medium
- high

2.3%
36.88%
60.82%
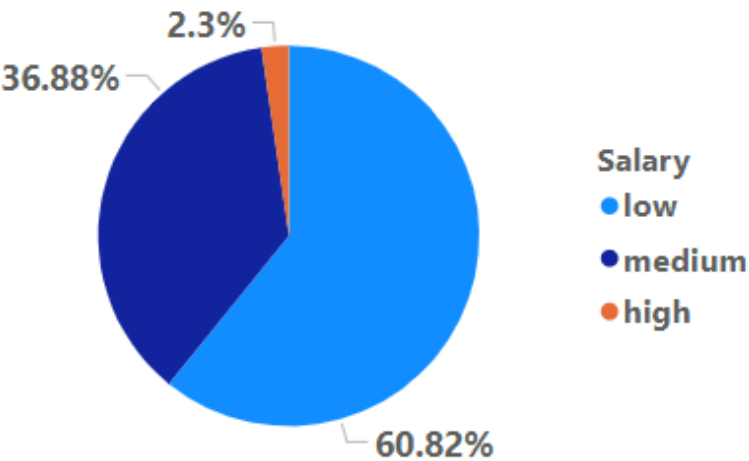
Resignation per Department

The highest number of resignations has been recorded in three departments: Technical, Sales, and Marketing.

The previous departments cover more than half of the employee's resignations with 48 over 82 total resignations.

| Department	Number	% Of Resignation
technical	25	30.49%
sales	14	17.07%
marketing	9	10.98%
support	8	9.76%
hr	6	7.32%
product_mng	6	7.32%
accounting	5	6.10%
IT	4	4.88%
RandD	4	4.88%
management	1	1.22%
Total	**82**	**100.00%**
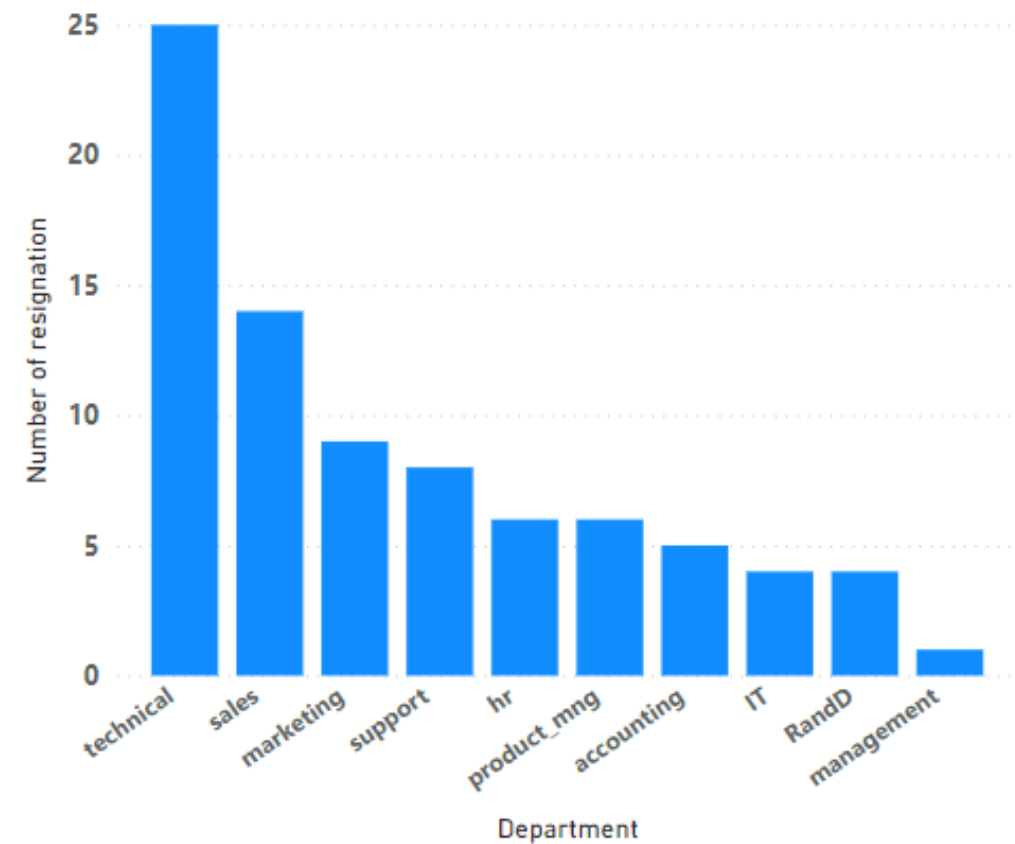
Year and Promotion in the Company – High level Employees

Year in the Company	Promotion	Sum of promotion_last_5years	%
3	46	0	56.10%
4	16	0	19.51%
5	20	0	24.39%
Total	82	0	100.00%

The high-salary employees who resigned have spent less than five years with the company.

In addition, they had been not promoted during their collaboration
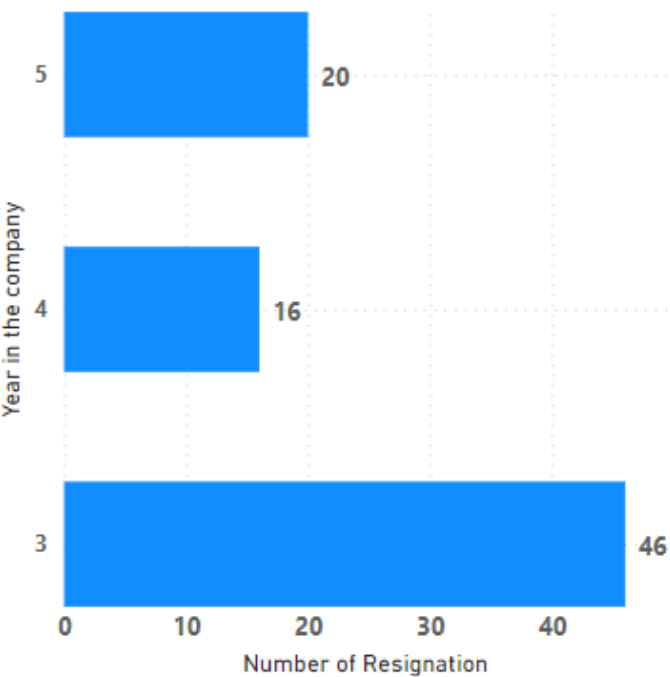
# Year and Promotion in the Company – High level/Employed

Year	Count of left	%GT Count of left
2	303	26.23%
3	474	41.04%
4	157	13.59%
5	46	3.98%
6	55	4.76%
7	38	3.29%
8	18	1.56%
10	64	5.54%
Total	1155	100.00%

Year	Promoted	%GT Count of left
2	10	13.89%
3	23	31.94%
4	2	2.78%
5	2	2.78%
6	1	1.39%
7	18	25.00%
8	2	2.78%
10	14	19.44%
Total	72	100.00%

The first table shows the length of employment for the current employees.

While the second table the number of promotions according to the length of the employment.

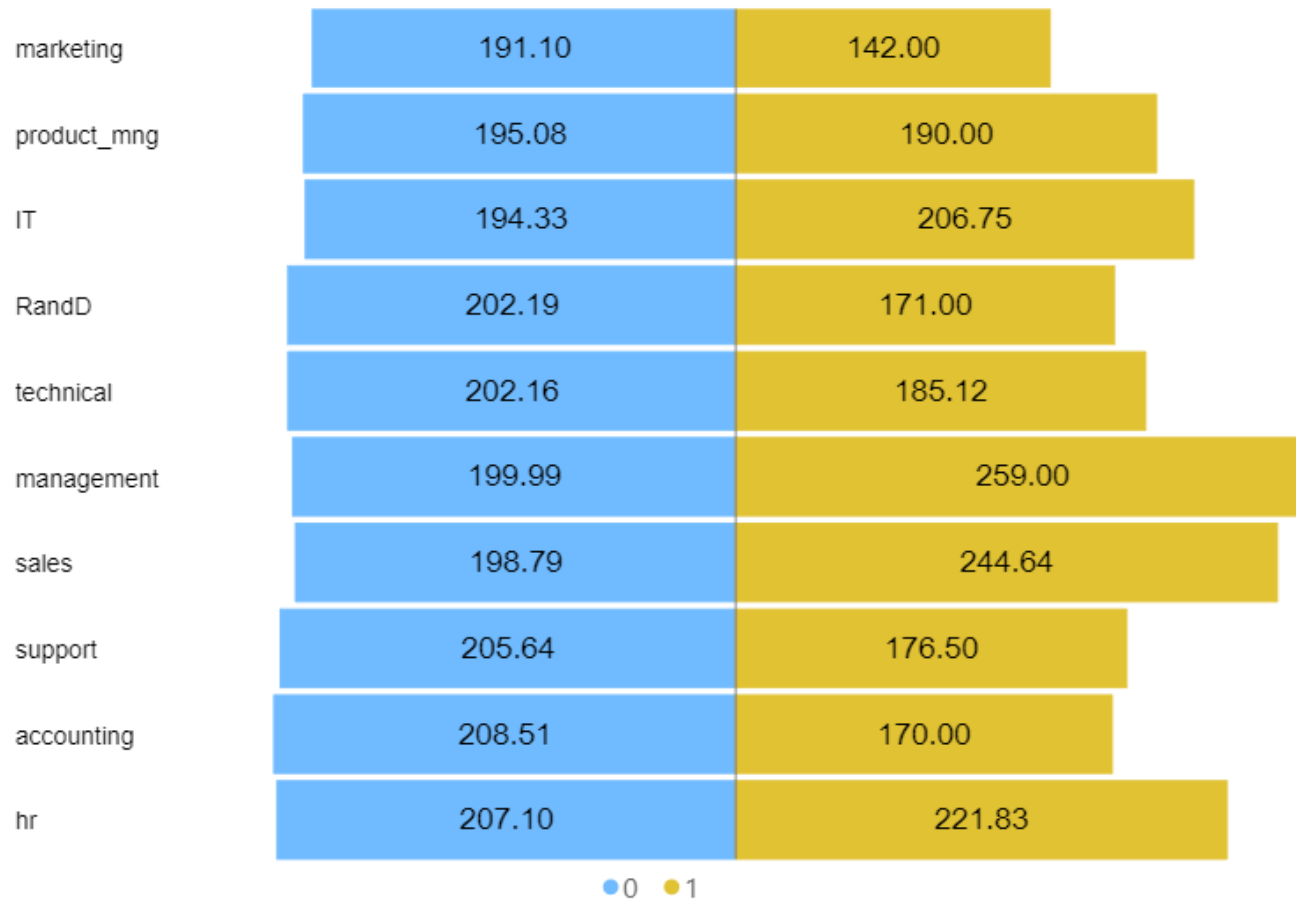# Current High Salary Employees Promoted vs not Promoted

6.23%

93.77%
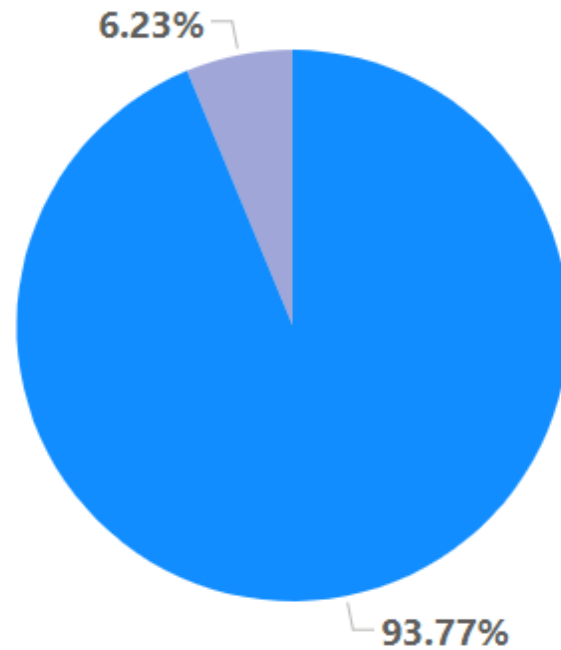
As a result of the previous analysis, just above 6% of the current employees have been promoted in the company.

In fact, just 72 employees over 1155 advanced to the next level.

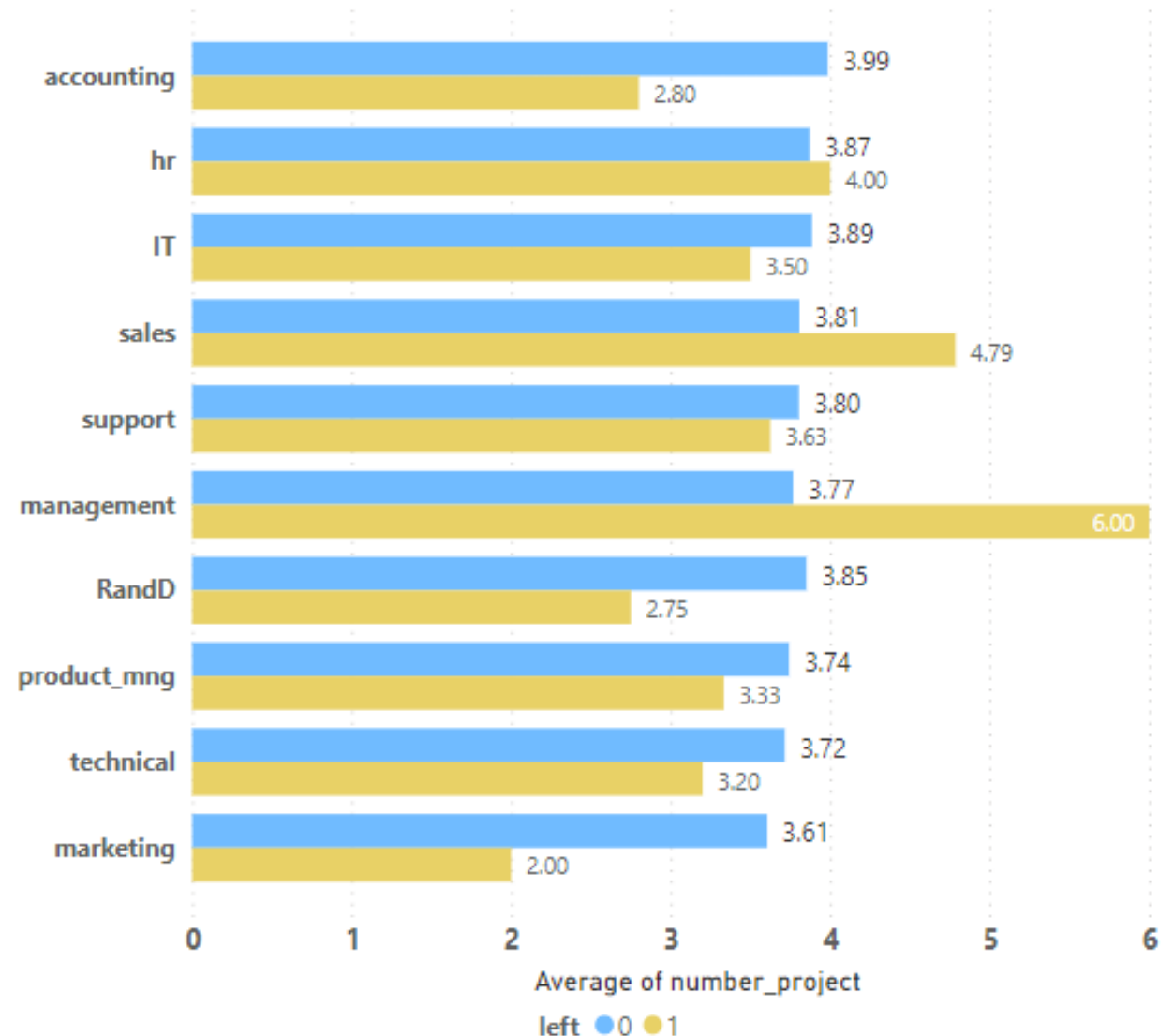# Comparison of working hours by Department
Employed vs. Not Employed

Department	0	1
marketing	191.10	142.00
product_mng	195.08	190.00
IT	194.33	206.75
RandD	202.19	171.00
technical	202.16	185.12
management	199.99	259.00
sales	198.79	244.64
support	205.64	176.50
accounting	208.51	170.00
hr	207.10	221.83

● 0   ● 1

0 = current employees
1 = left the company

The graph compares the average working hours by department splits by current employees and employees who signed off.

Comparison of Number of projects by Department Employed vs. Not Employed

salary	high	
left	**Count of left**	**Average of number_project**
⊟ **0**	1155	3.79
accounting	69	3.99
hr	39	3.87
IT	79	3.89
management	224	3.77
marketing	71	3.61
product_mng	62	3.74
RandD	47	3.85
sales	255	3.81
support	133	3.80
technical	176	3.72
⊟ **1**	82	3.45
accounting	5	2.80
hr	6	4.00
IT	4	3.50
management	1	6.00
marketing	9	2.00
product_mng	6	3.33
RandD	4	2.75
sales	14	4.79
support	8	3.63
technical	25	3.20
Total	1237	3.77

Bar chart — Average of number_project, left: ●0 ●1

Department	0	1
accounting	3.99	2.80
hr	3.87	4.00
IT	3.89	3.50
sales	3.81	4.79
support	3.80	3.63
management	3.77	6.00
RandD	3.85	2.75
product_mng	3.74	3.33
technical	3.72	3.20
marketing	3.61	2.00

0 = current employees
1 = left the company

Comparison Satisfaction Level Employed vs. Not Employed

Not Employed

satisfaction_level (Not Employed)	Number
0.00	4
0.10	12
0.20	0
0.30	15
0.40	33
0.50	0
0.60	3
0.70	6
0.80	7
0.90	2
1.00	0
Total	82

Employed

satisfaction_level (Employed)	Number
0.10	57
0.20	53
0.30	45
0.40	71
0.50	202
0.60	196
0.70	200
0.80	166
0.90	162
1.00	3
Total	1155

The satisfaction level shows two clear trends. Not current employees have expressed a satisfaction level equal to or below 0.4. Almost 80% of them have a negative view of the company.

While almost 80% of current employees have expressed a satisfaction level equal to or above 0.5.

Comparison of Satisfaction Level by Department Employed vs. Not Employed
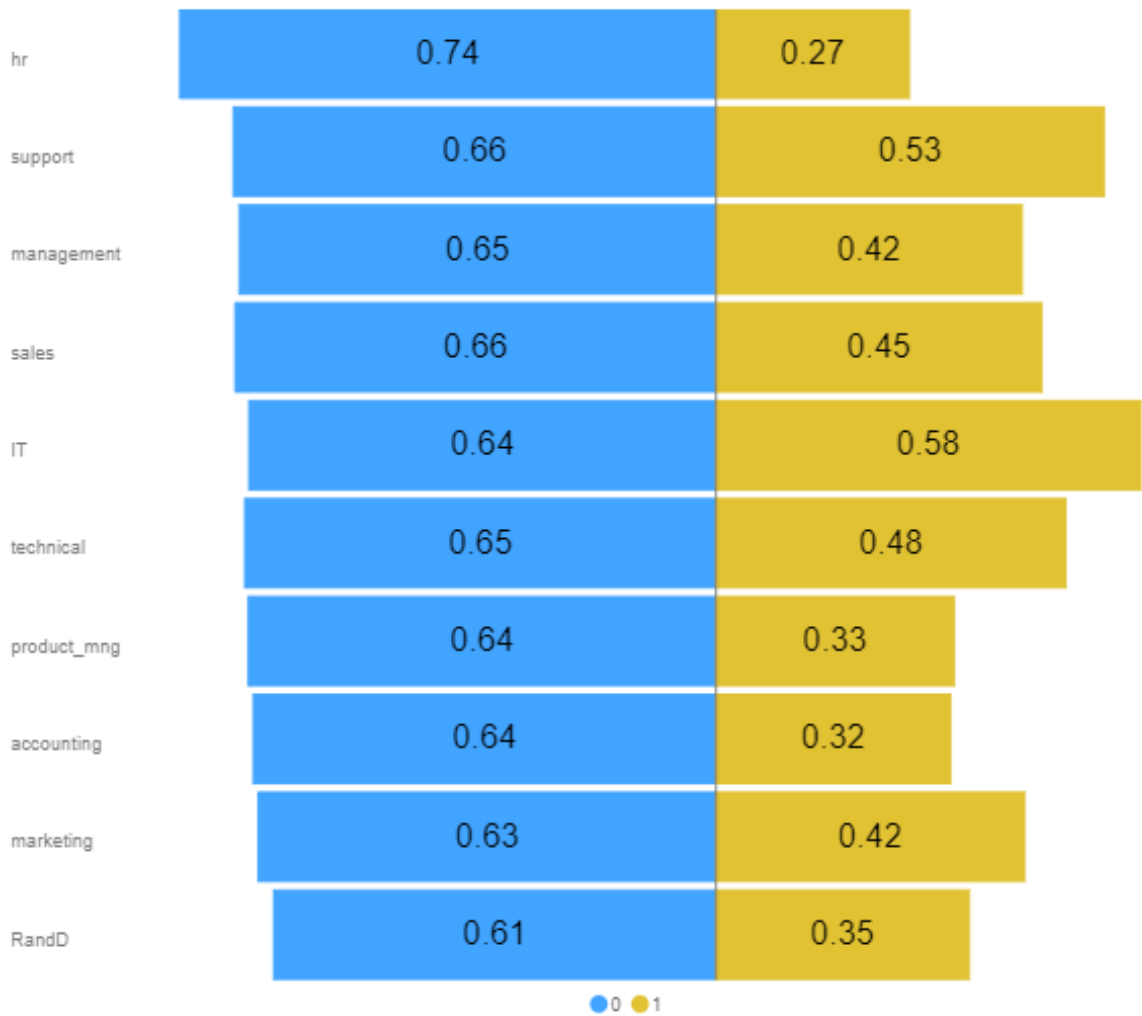
Department	0	1
accounting	0.64	0.32
hr	0.74	0.27
IT	0.64	0.58
management	0.65	0.42
marketing	0.63	0.42
product_mng	0.64	0.33
RandD	0.61	0.35
sales	0.66	0.45
support	0.66	0.53
technical	0.65	0.48
Total	**0.65**	**0.43**

0 = current employees
1 = left the company

Assessment of the Previous Analysis

The previous analysis focuses its attention to understand the factors behind the sign-off of the high salary employees.

The analysed cluster is just 82 over 1237 high-salary workers among all the departments.

Nevertheless, the cluster is not enormous, it shows some important trends across the following factors:

-Department

-Length of the employment

-Promotion

-Working hours

-Number of Projects

-Satisfaction Level

Department

The highest number of resignations comes from three departments such as:
-Technical
-Sales
-Marketing

Almost 60% of sign-off has been recorded in the previous departments.

Lenght of the employment - Promotion

All the staff who decided to resign has spent less than 5 years with the company and none of them has received any promotion during their employment.

In addition, the company shows a low level of promotion level with just 6% of promotion for high salary employees.

Satisfaction Level

The satisfaction level of not current employees shows a threshold of 0.4 out of 1 where most employees decided to leave the company after expressing this vote.

In fact, almost 80% of not current employees have expressed negative feedback below 0.4 out of 1.

The analysis of the satisfaction level by department displays a common trend below 0.5 out 1 of not current employees.

Working Hours – Number of Projects

The assessment of working hours and number of projects does not show a clear trend.

However, we can highlight the behaviour of the following departments:

- Techincal
- Sales
- Marketing

The current employees of the Technical department work approximately 17 hours on average more than the one who resigned. While the number of projects is quite similar.

On the opposite side, the Sales department displays on average more than 45 hours per resigned employees compared to the current employees.

Also, the current employees have been involved on average in fewer projects than the ones who no longer collaborated with the company.

Finally, the Marketing Department shows that current employees have been more involved with more hours and more projects respect than the resigned ones.

Conclusion and Recommendation

Overall, the resignation of high-salary staff is not high but the company should implement more internal strategies to keep their talent and rise the overall morale.

I can recommend the following strategies:

-Having more internal programs to promote talents. This has a positive impact on the morale and retains the employees-Three departments show a high level of resignation: Technical, Sales, and Marketing. The company should implement an internal investigation to understand to root causes.

- Working extra hours has a negative impact in the Sales department where the resigned staff has worked more than 45 hours on average than the current employees. On the opposite side, the Technical and Marketing departments indicate an average of working hours for the resigned employees less than the current employees. I can suggest reformulating the staff to have the suitable number of people according to the department

-The threshold of 0.5 out of 1 for the satisfaction level might ring the bell for the future.

Conclusion and Recommendation

Given the previous analysis, I select the following group of

employees to control because it might decide to resign.

They have the following features:

- Not been promoted

- Five or fewer years of employments

- Satisfaction level equal to or below to 0.5

- Belong to the Technical, Sales, and Marketing Departments

Department	Number
marketing	9
sales	32
technical	21
Total	62