

# PROOF OF CONCEPT

TAKENMIND

# ABOUT THE DATA SET

The data is for company X which is trying to control attrition. There are two sets of data: "Existing employees" and "Employees who have left". Following attributes are available for every employee.

Satisfaction Level

Last evaluation

Number of projects

Average monthly hours

Time spent at the company

Whether they have had a work accident

Whether they have had a promotion in the last 5 years

Departments (column sales)

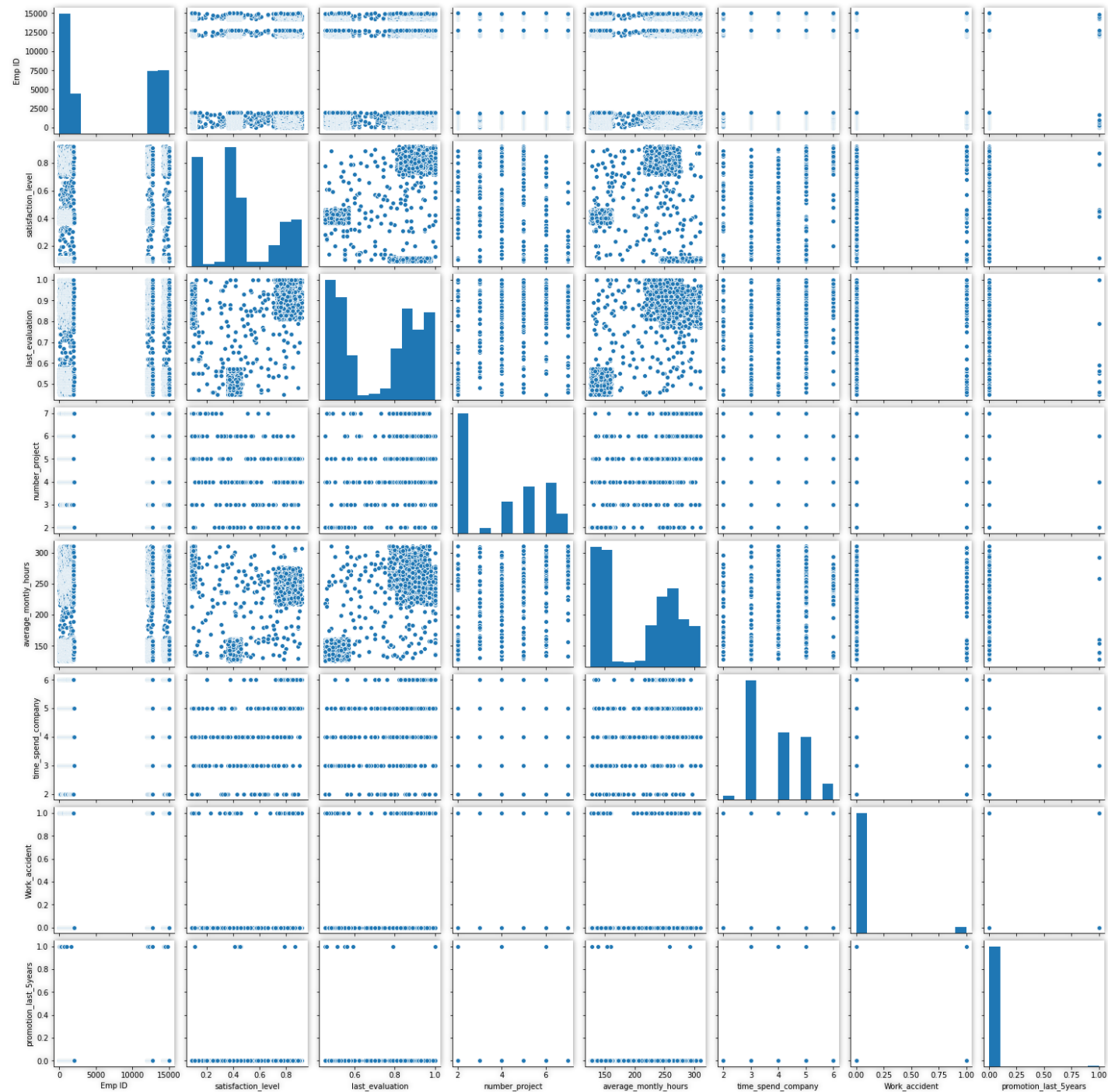
Salary

## PROBLEM STATEMENT

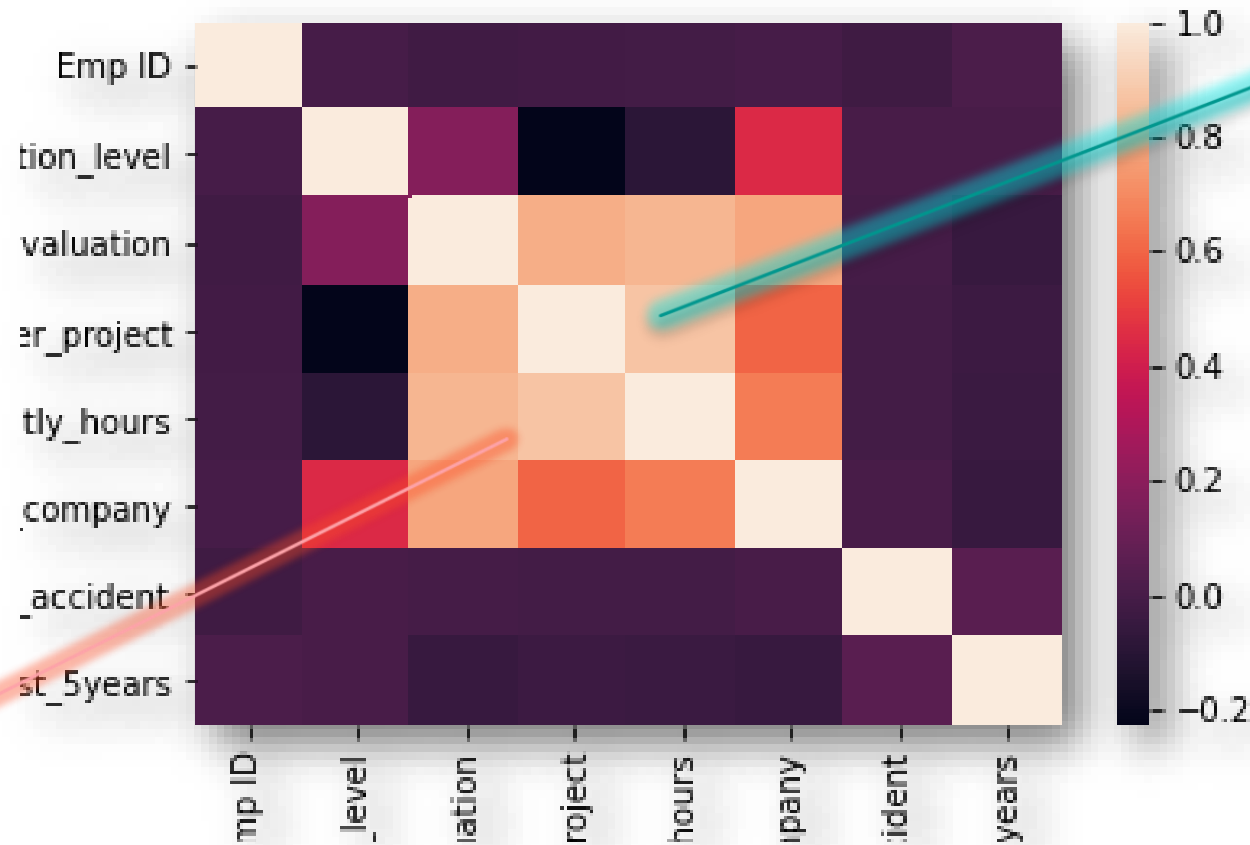
- What type of employees are leaving?
- Determine which employees are prone to leave next.

# ATTRITION RATE

- An issue that every company deals with is attrition. Sales being an especially high attrition function makes this analysis paramount. Sales attrition is a result of several components including unoptimized sales compensation, unrealistic quotas, ineffective mentoring, career-path ambiguity, training inefficacy or just bad recruiting. Hence the ability to slice and dice sales attrition many ways to understand trends and their root-causes can seriously help sales leadership make the required changes to build a healthier more performing sales force.
- The rate of attrition or the inverse retention rate is the most commonly used metric while trying to analyze attrition. The attrition rate is typically calculated as the number of employees lost every year over the employee base. This employee base can be tricky however. Most firms just use a start of year employee count as the base. Some firms calculate it on a rolling 12 month basis to get a full year impact. This ratio becomes harder to use if your firm is growing its employee base. For example, let's say on Jan 1st of this year there were 1000 employees in the firm. Over the next 12 months we've lost 100 employees. Is it as straight forward as a 10% attrition rate. Where it gets fuzzy is how many of those 100 employees that were lost were in the seat on Jan 1st. Were all the 100 existing employees as of Jan 1st or were they new hires during the year that termed. Hence the attrition rate must be looked at in several views.



# CORRELATION

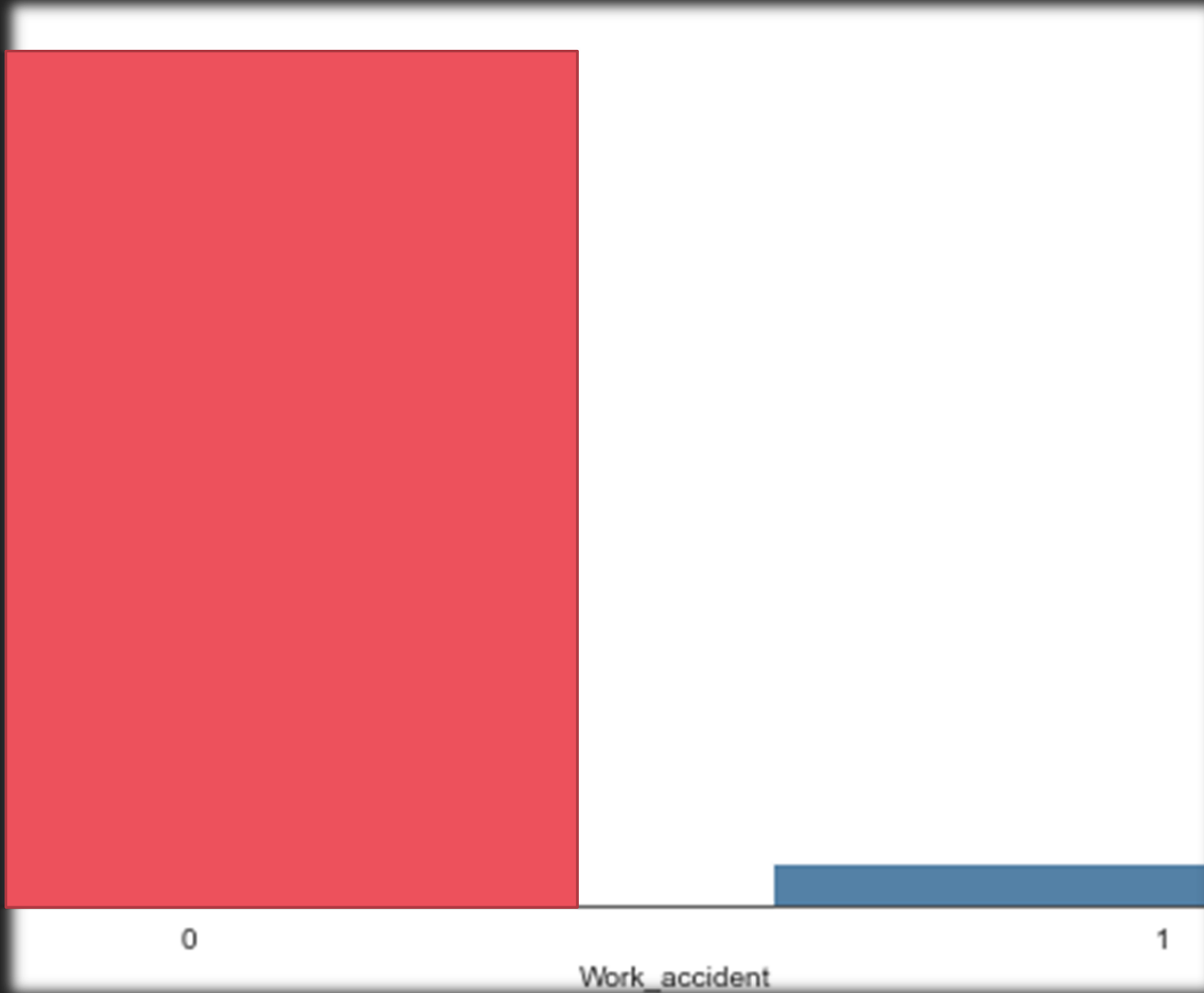


Evaluation is based on the number of hours spent in the company.

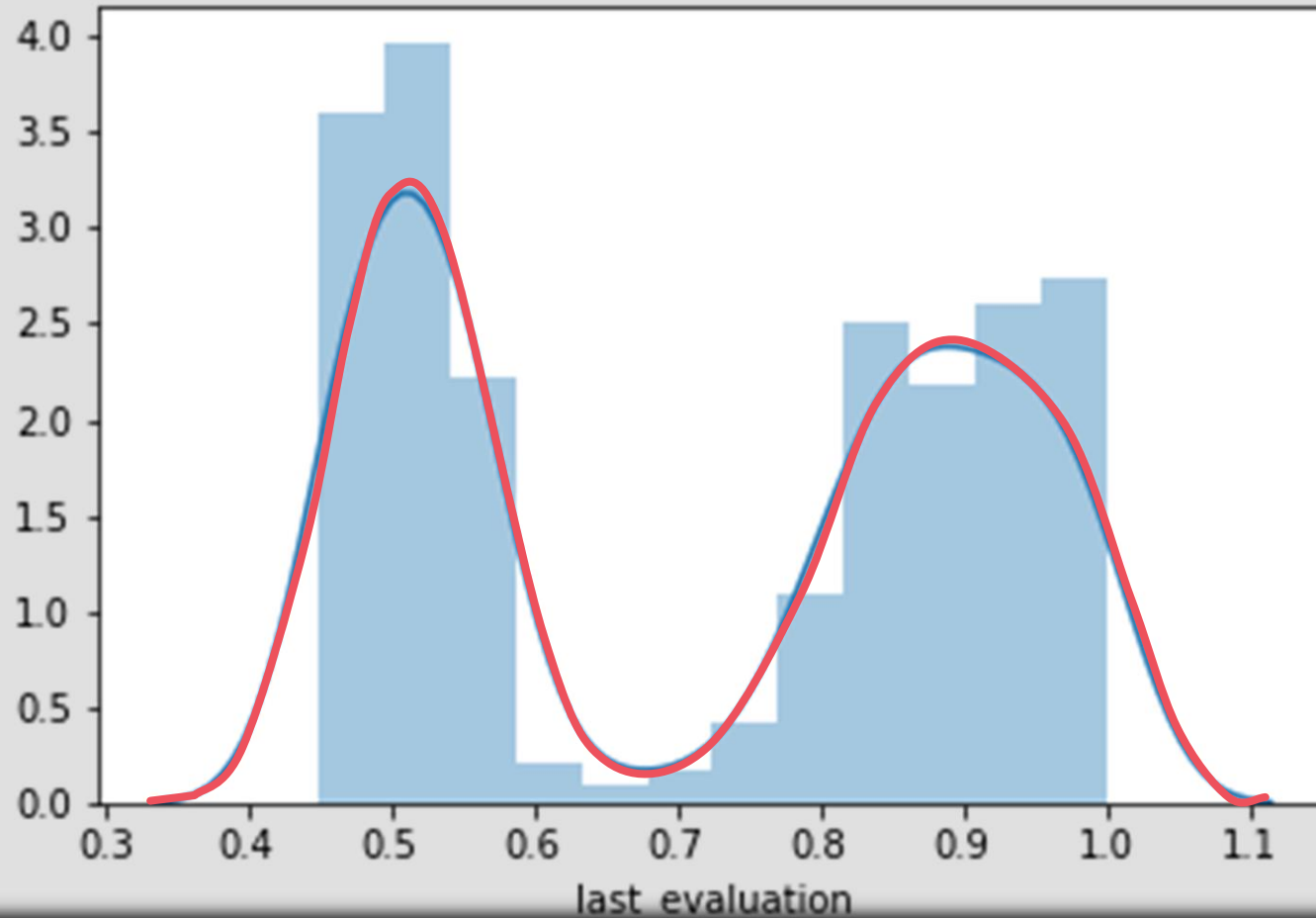
We see that employees with more amount of projects devote more number of hours monthly.

# WORK ACCIDENT

- We can see that work accidents of the employees is not a major concern for them leaving the company.

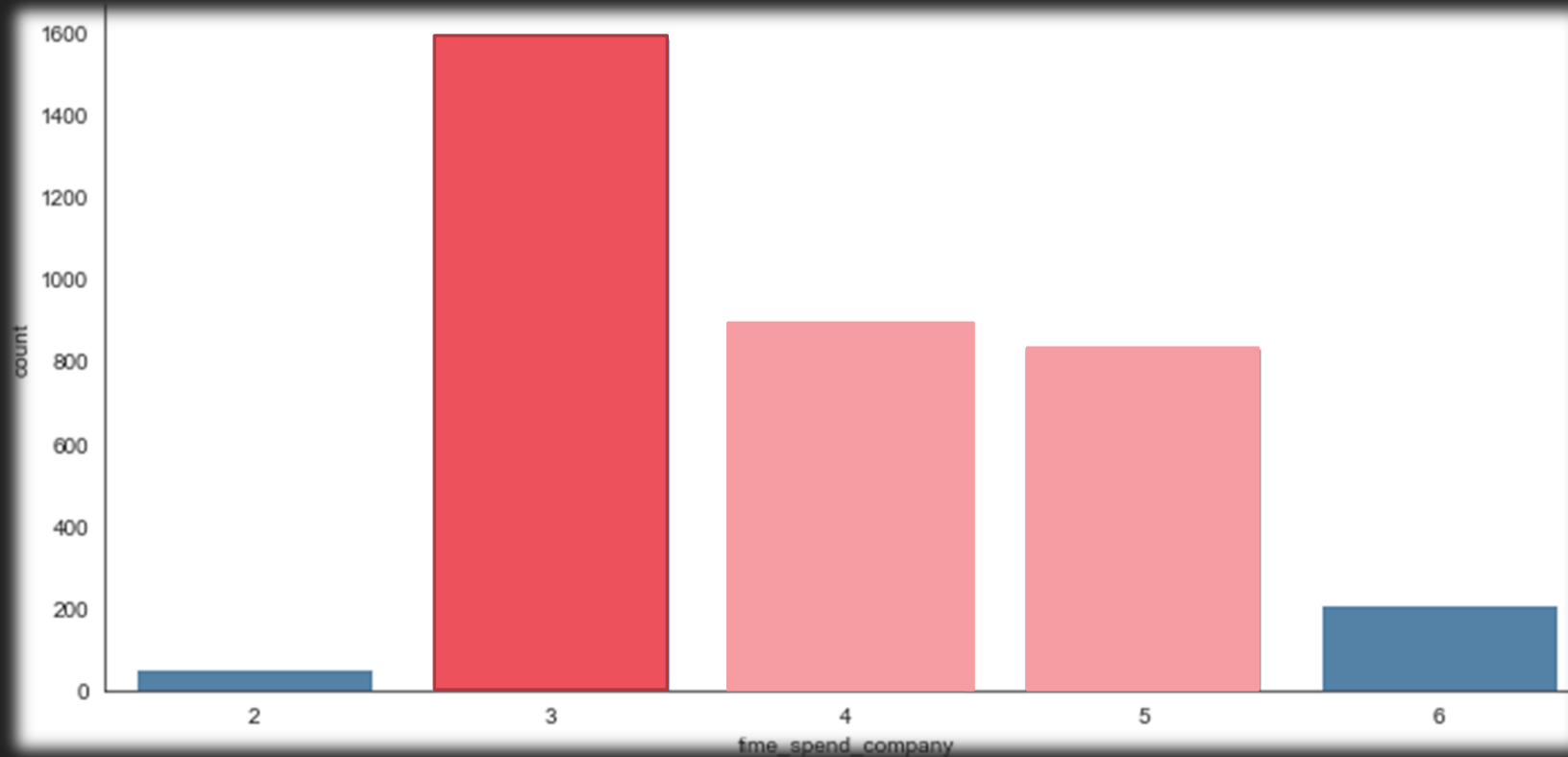


# LAST EVALUATION



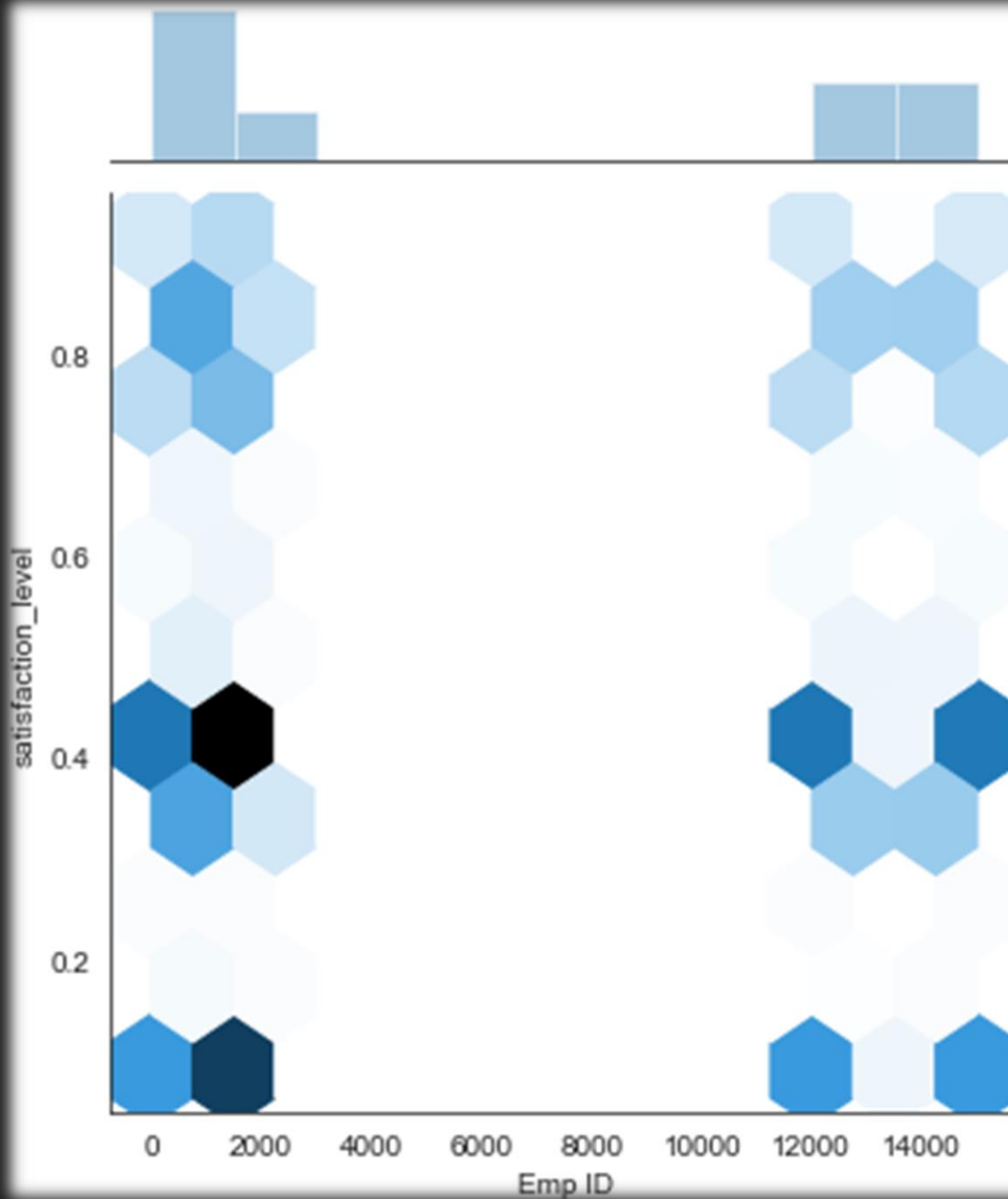
- We can observe that last evaluation of the left Employees is primarily between 0.5-0.6 or 0.8-1.0 which is fairly good.
- Hence, the evaluation metric of the company is not the major concern for the committed employees quitting.





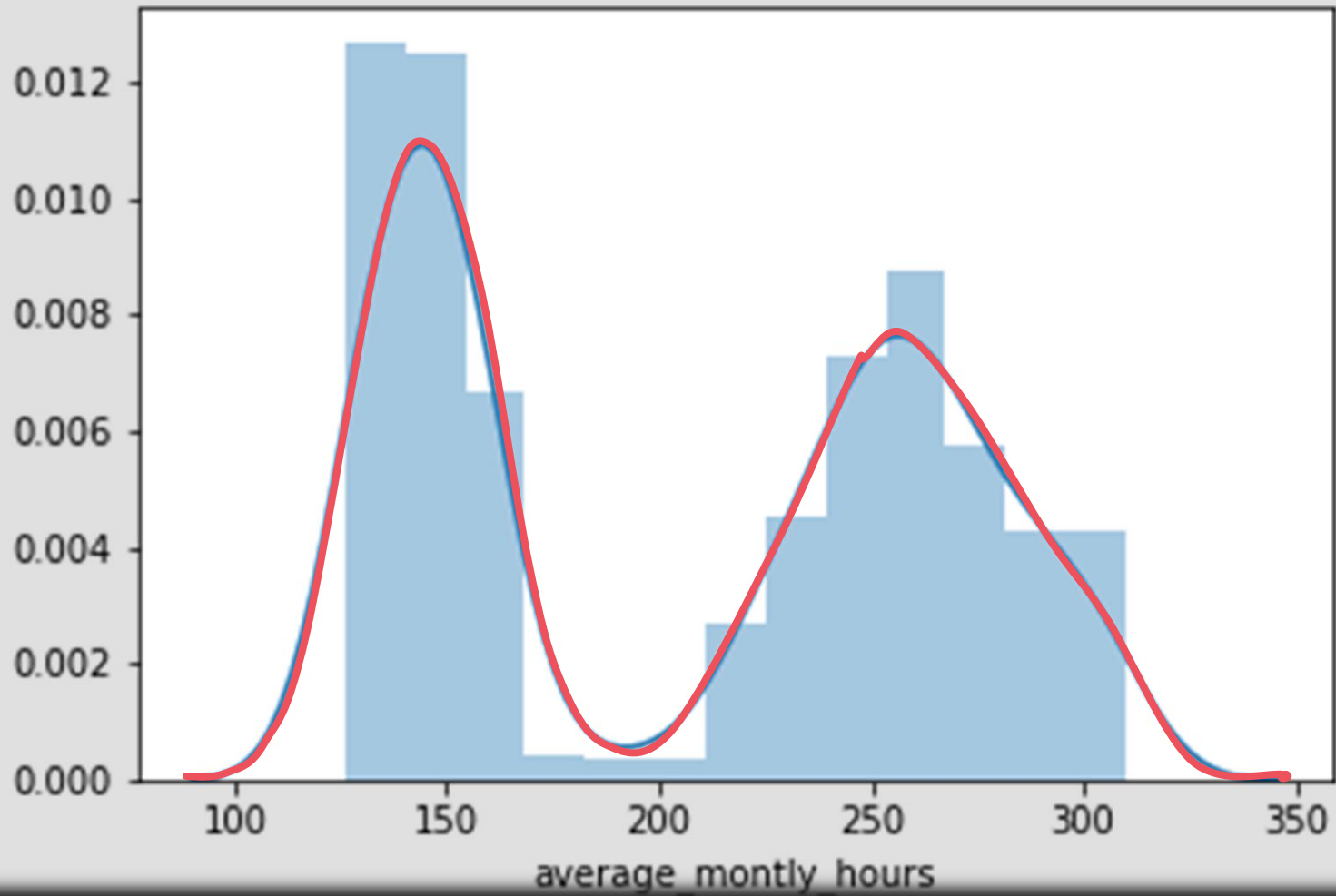
## TIME SPENT IN THE COMPANY

- We observe that maximum employees have dedicated 3 to 5 years in the company.
- This is a proof that infant attrition rate is low and the company does not dispense lucrative measures to hold back their devoted employees.



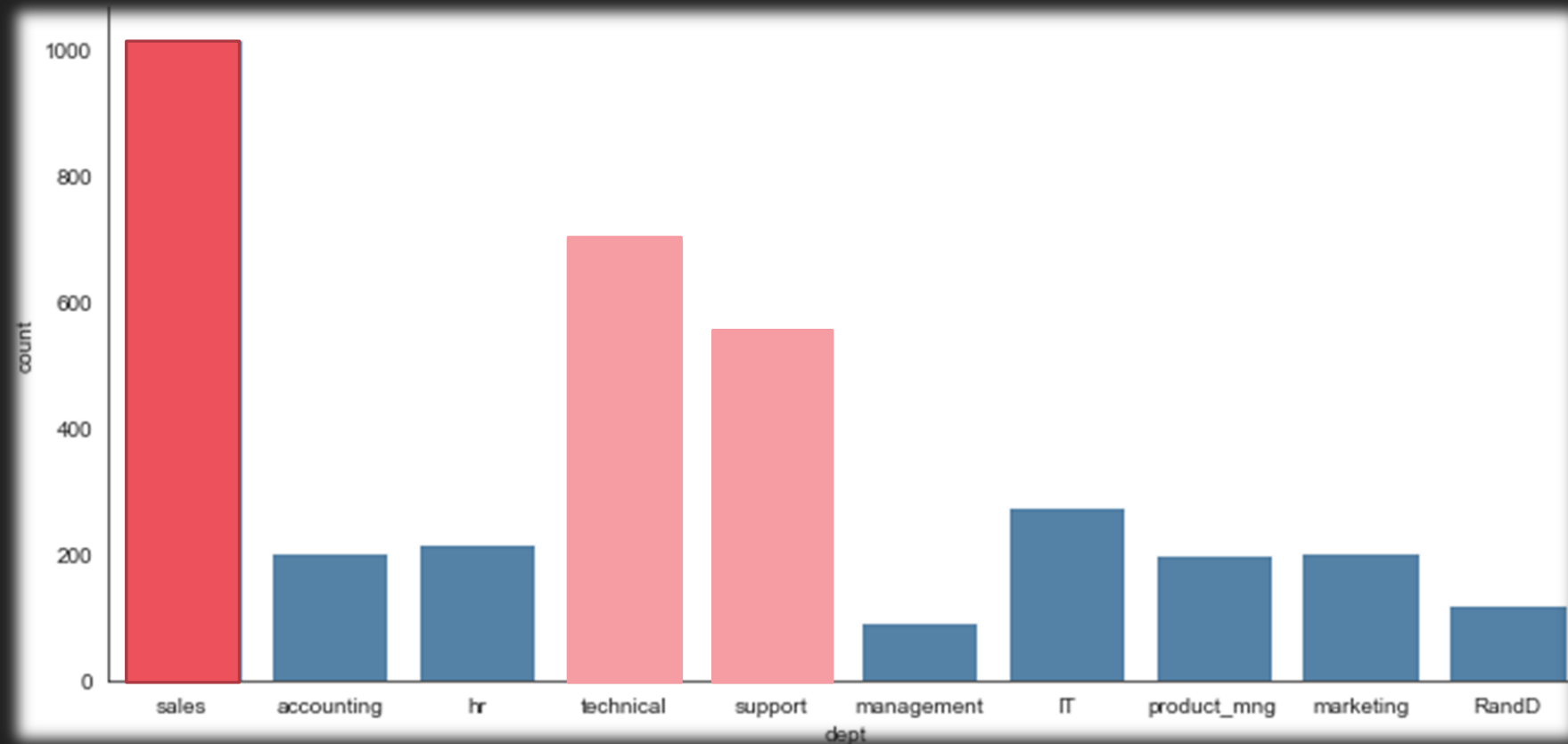
## SATISFACTION LEVEL

- From the presented plot, we see that the satisfaction level of many employees who left the company was majorly in the range 0-0.4 which is extremely low.
- In terms of job or company service satisfaction, the ratings seem to be a major disappointment.



## AVERAGE MONTHLY HOURS

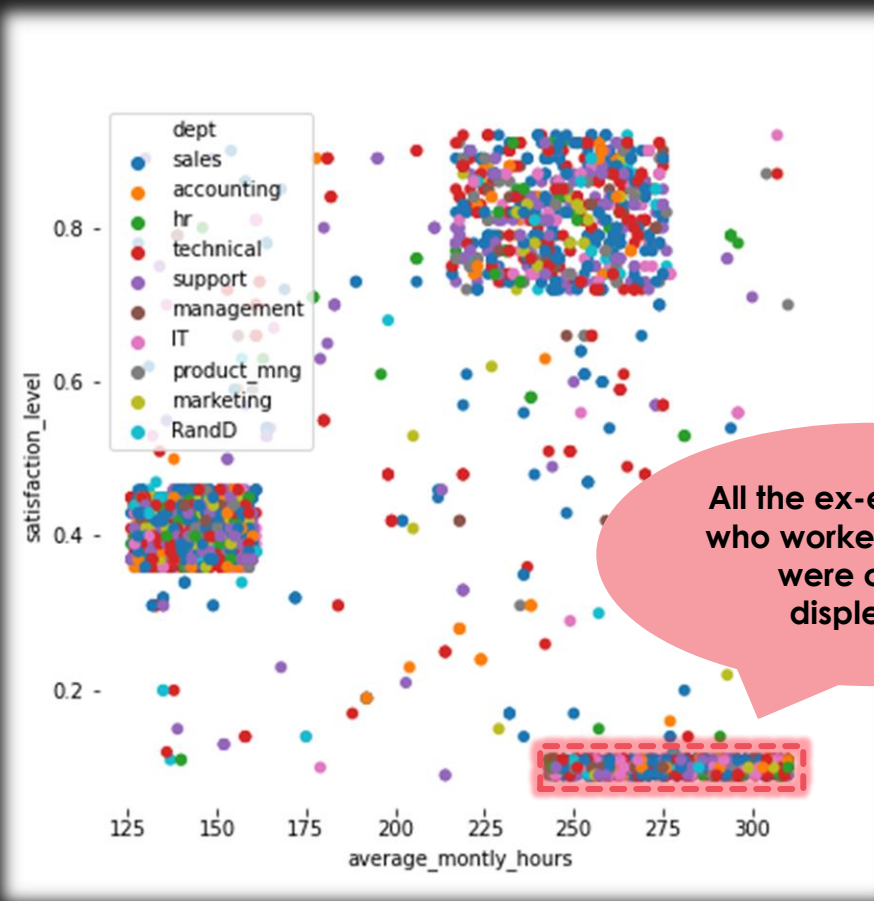
- The average monthly hours of the employees who left the company is noted to be mostly 150 or in the range 200-300.
- Though this parameter is not a major priority for the attrition rate, it can also not be ignored. While most of them haven't devoted that many hours, we still see a majority working for around 300 hours which is a bit too high for any average working man.



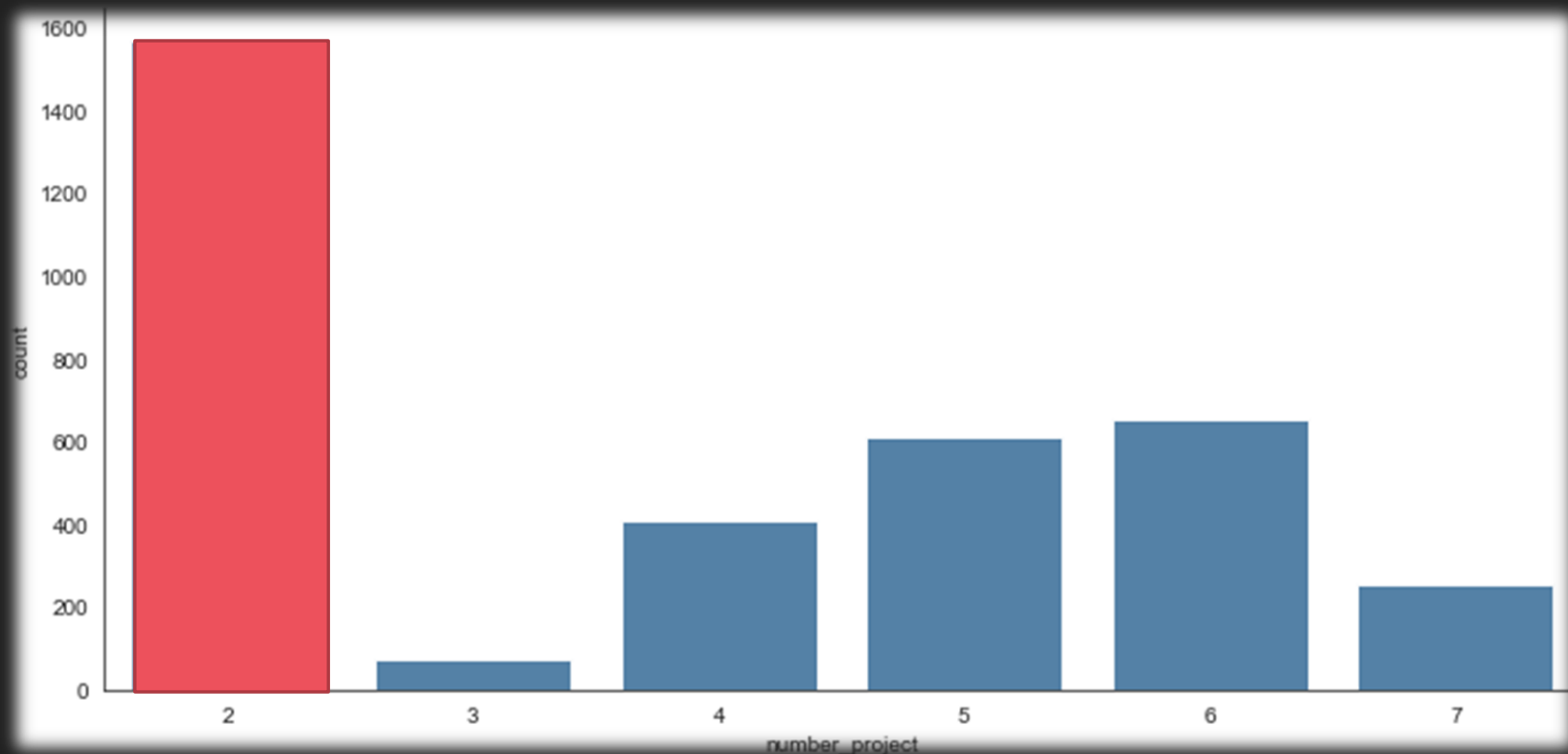
## DEPARTMENT

- Many employees in the Sales department are seen to leave the company.
- Apart from this, Technical and Support department have also seen many employees parting.
- Department is hence an important parameter in the attrition criteria.

# LOW SATISFACTION LEVEL OF EMPLOYEES WORKING FOR MORE NUMBER OF HOURS



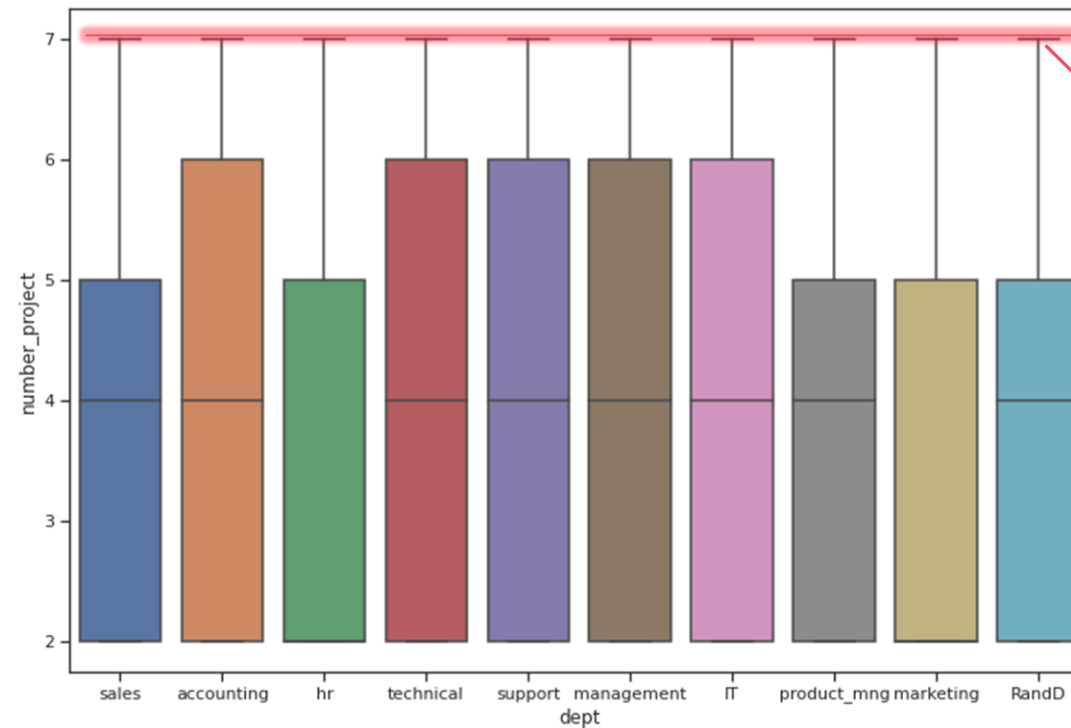
All the ex-employees  
who worked overtime  
were clearly  
displeased



## NUMBER OF PROJECTS

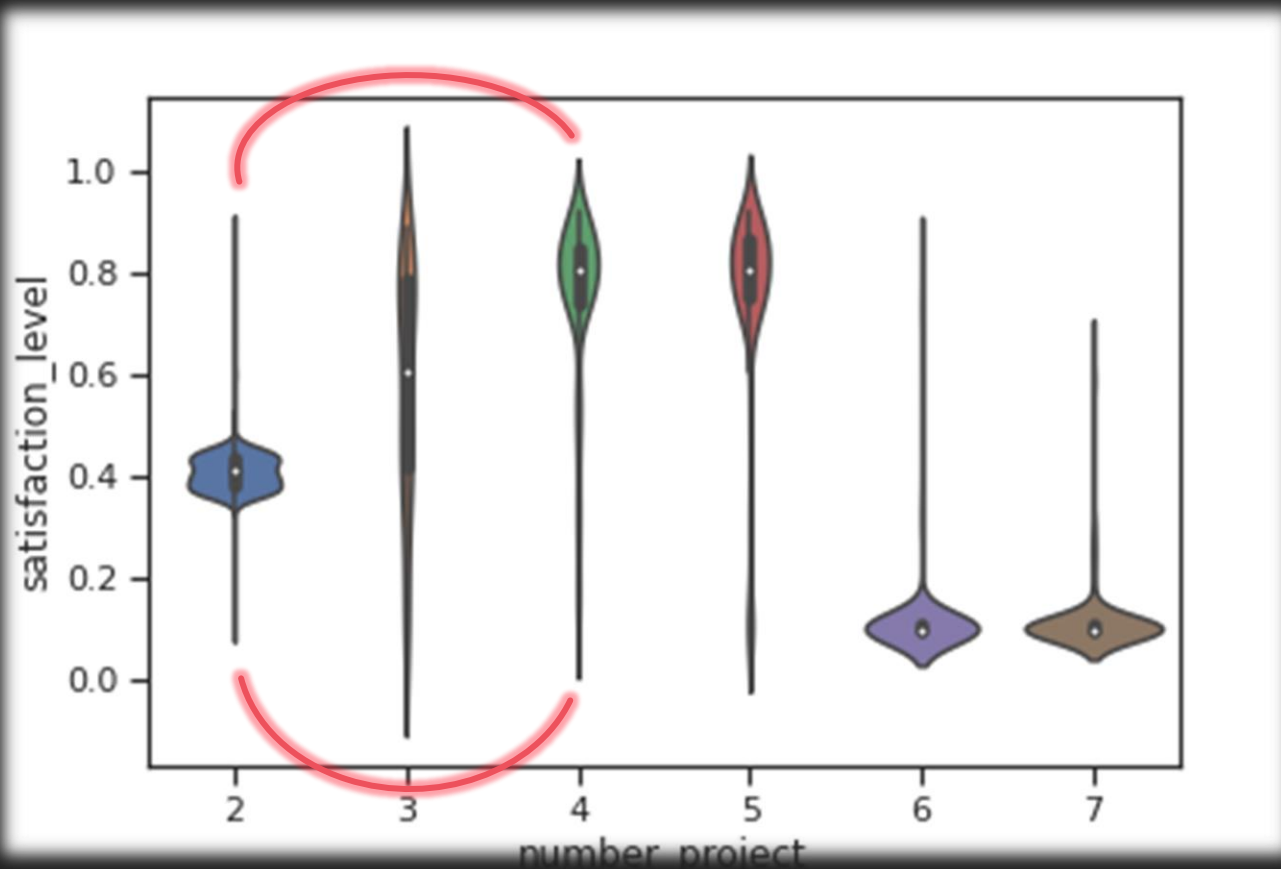
- We can conclude that majority employees who left were not offered with more than 2 projects in the term of their service in the company.
- Hence, we are forced to assume that the inability to utilise their full potential pushed the employees into quitting their posts.

# NUMBER OF PROJECTS ASSIGNED BASED ON THE DEPARTMENTS



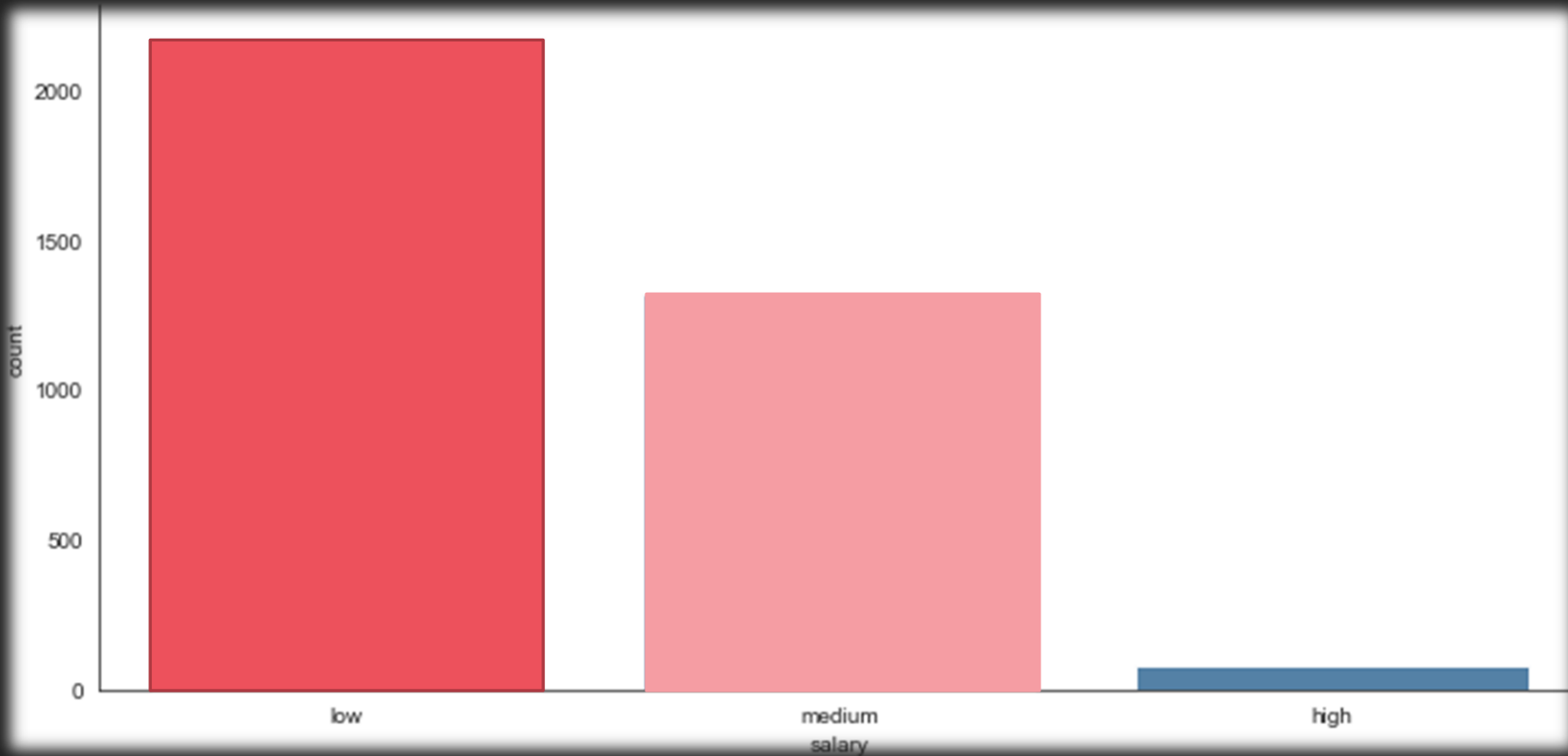
All of the departments were given equal opportunities to work/collaborate on projects

# SATISFACTION LEVEL BASED ON NUMBER OF PROJECTS



- We don't see a concrete pattern in employee level satisfaction with respect to the number of projects they worked on.
- Hence, we can generalise that the satisfaction level was not based on the number of projects assigned to them.

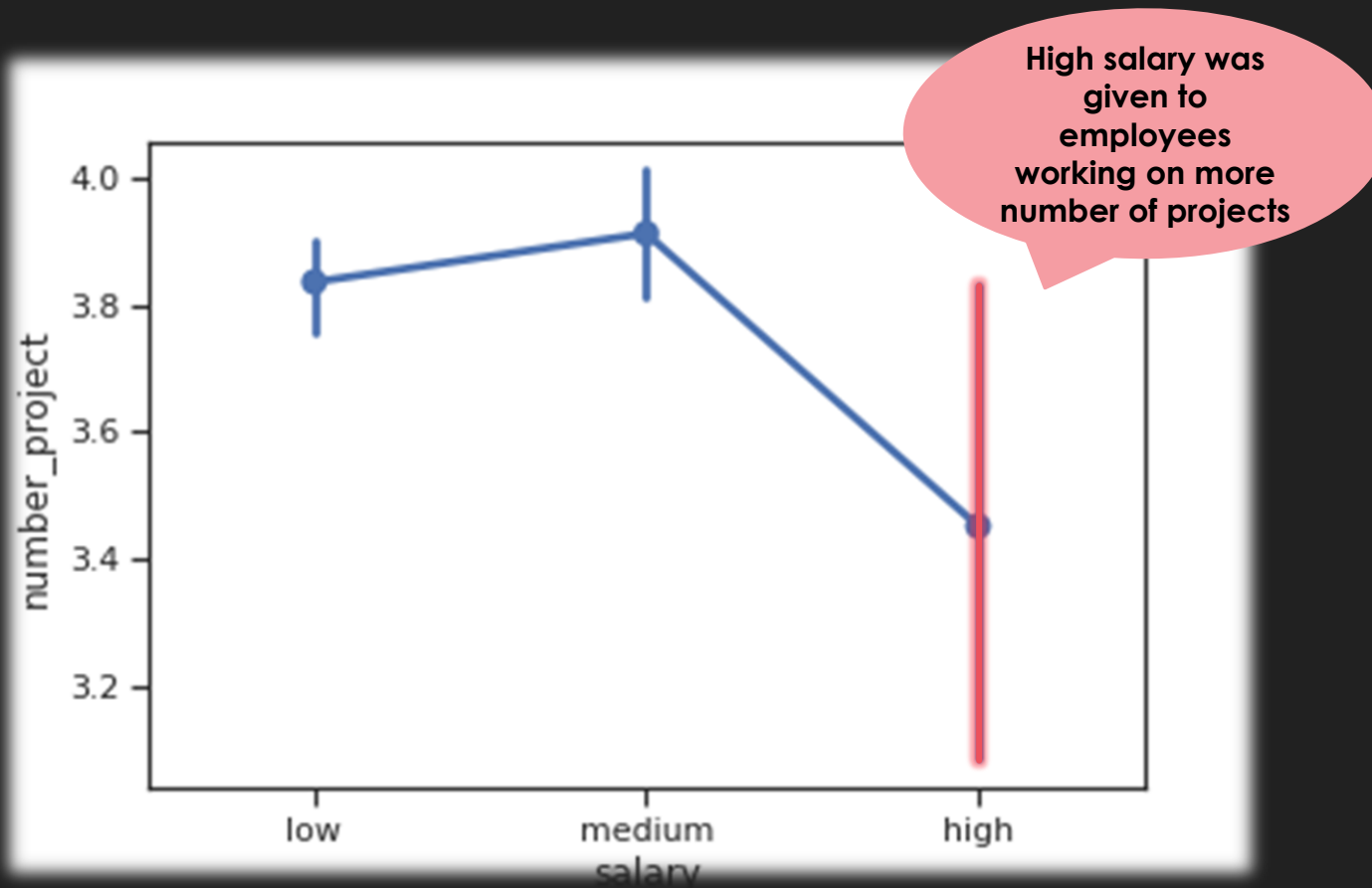


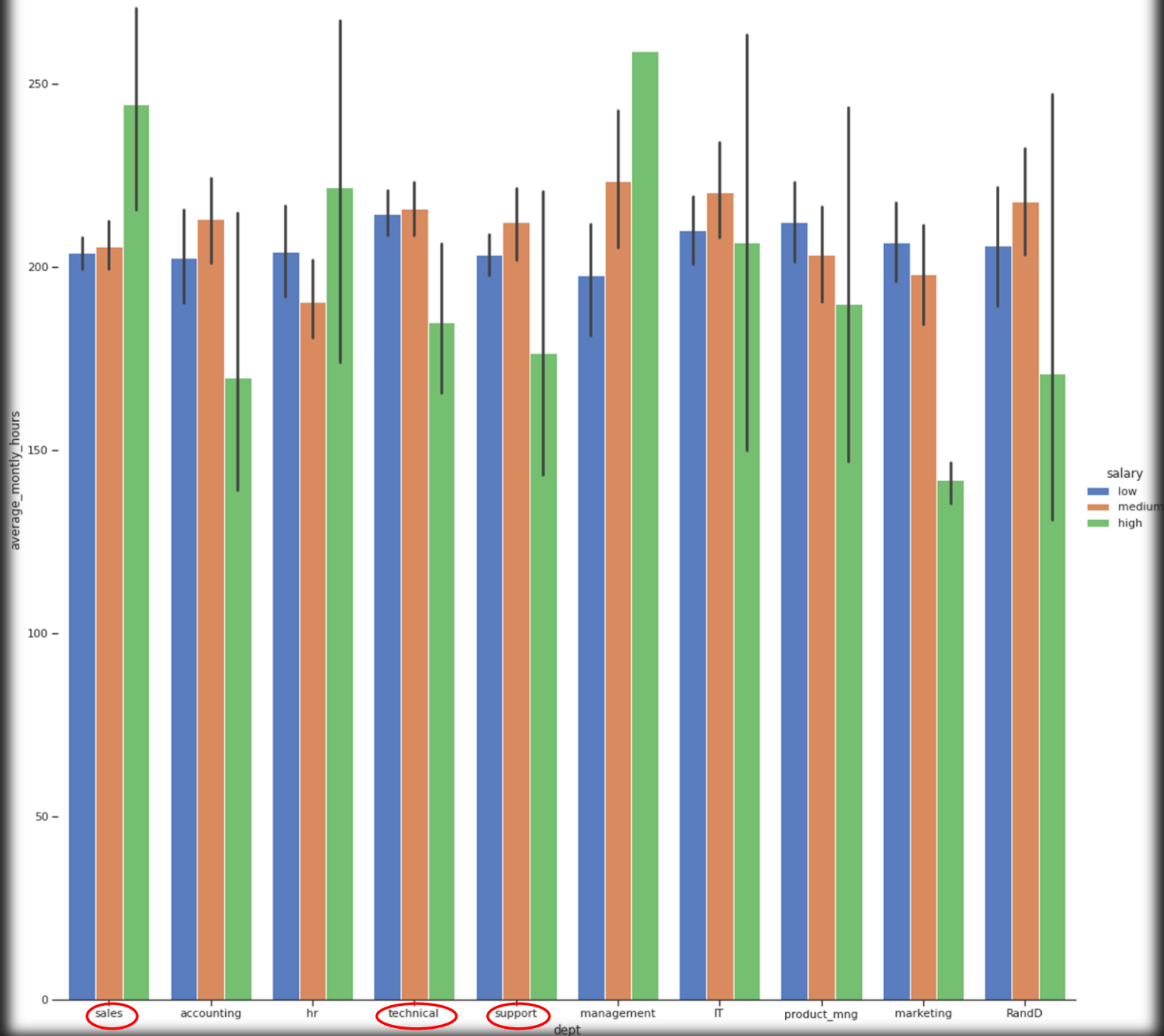


# SALARY

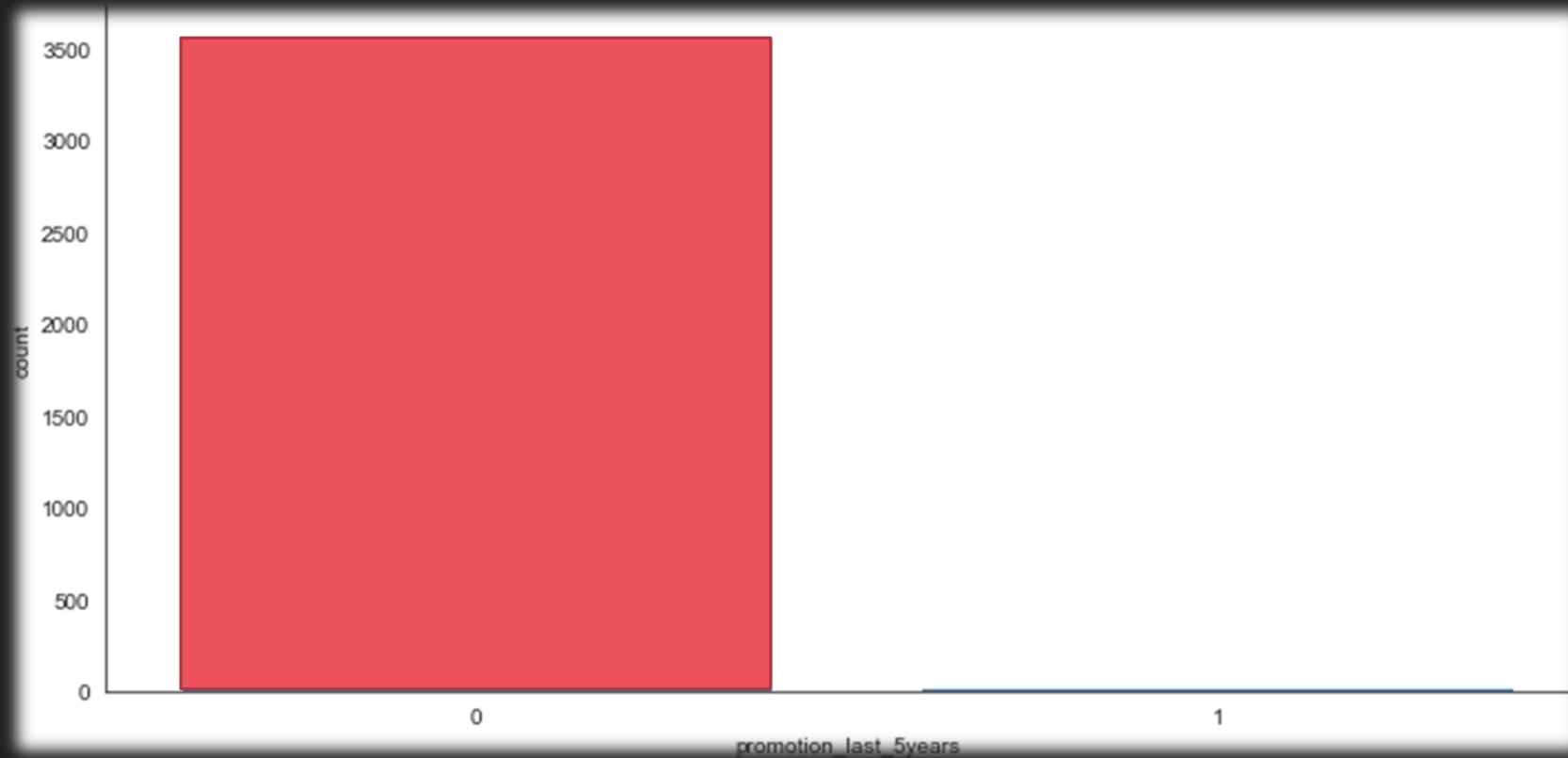
- We can analyse from the graph that **low salary** is one of the key concerns when it comes to attrition rate.
- Many employees with low salary have left the company maybe in search of better pay or better opportunities.

# SALARY BASED ON NUMBER OF PROJECTS





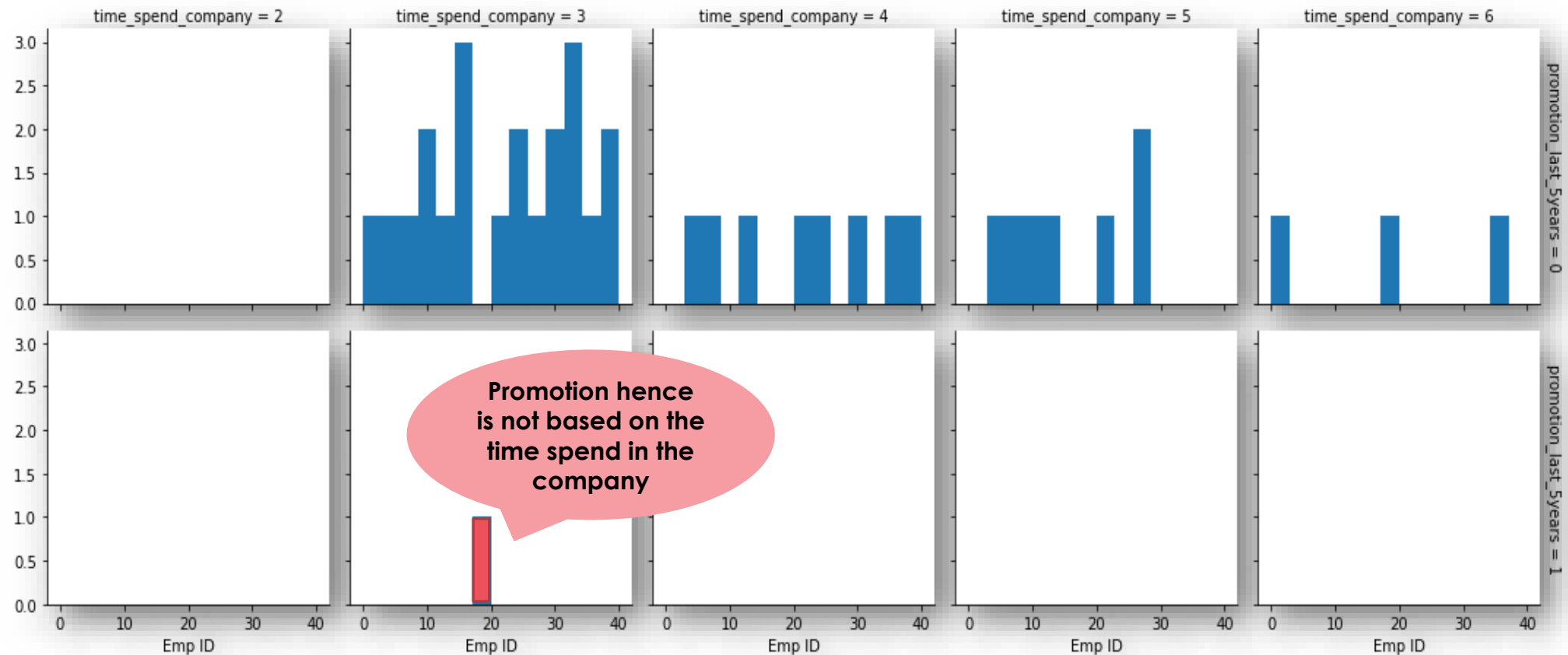
- Also, we notice that the salary of employees working over-time was proportionately high.
- Employees with low salary worked for decent number of hours.
- Moreover, Sales, Technical and Support department employees were neither subjected to work extra nor was their salary unjust.



## PROMOTION IN LAST 5 YEARS

- We can analyse that no promotion opportunities were offered to the employees who left in the last 5 years.
- This can prove to be a major reason why employees chose to quit in search of new doors offering better avenues.

# PROMOTION VS TIME SPEND IN THE COMPANY



# OBSERVATIONS

- Work accidents, Evaluation metrics and Time spent in the company are not a major concern for the employees leaving.
- Satisfaction of majority employees with their jobs seem to be low, especially of the ones who worked overtime.
- Number of projects offered to the ex-employees is significantly low, despite of having no relevance with employee satisfaction level, salary and departments.
- Lack of promotion and salary raise.
- Secondary factor also includes the average monthly hours of the employees which is considerably high of the employees who left particularly in Sales and IT departments.
- If we deeply introspect the classification in the job portfolios, the Sales, Technical and Support Departments are much more prone to the company's attrition rate and require increased attention.

# CONCLUSION

Therefore, on the basis of observation, it is recommended to work on the parameters listed below for improving the attrition rate of the company following the priority in which they are listed:

- Promotion and salary-raise opportunities
- Satisfaction level of the employees
- Flexible working hours
- Number of projects offered to the employees
- Moreover, the Sales, Technical and Support Departments are much more prone to the company's attrition rate and require increased attention.