

College of Engineering Roorkee

SCHOOL OF MANAGEMENT



Employee Attrition Analysis

A PROJECT REPORT SUBMITTED IN PARTIAL FULLFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION

PROJECT REPORT

Master of Business Administration

Human Resource

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DECLARATION

I, Subham Srivatsa hereby declare that the project report on ‘Employee Attrition Analysis’ is a genuine research work undertaken by me.

All care has been taken to keep this report error free and I sincerely regret for any unintended discrepancies that might have crept into this report. I shall be highly obliged if errors (if any) be brought to my attention.

Signature

Name: Subham Srivatsa

Date: 5th Feb 2021

Place: Roorkee, Uttarakhand

ACKNOWLEDGEMENT

Many have contributed to the successful completion of this project, I would like to place on record my grateful thanks to each of them, and report would be incomplete without giving due credit to them.

I feel extremely exhilarated to have completed this project under the able and inspiring guidance of **Dr. S. K. Gaur**. His guidance and timely encouragement have infused courage in me to complete the work successfully.

In the end I sincerely thank all the respondent, friends and all others who helped me in completion of this project.

Signature

INDEX

Contents

1. INTRODUCTION.....	5
2. LITERATURE REVIEW.....	9
3.OBJECTIVES.....	11
4. DATA ANALYSIS.....	12
5. RESEARCH METHODOLOGY.....	24
6. LIMITATION OF THE STUDY.....	25
7. SUGGESTIONS.....	26
8.CONCLUSIONS.....	27
9. BIBLIOGRAPHY/WEBLIOGRAPHY.....	28

INTRODUCTION

In this project I did Analysis of Employee Attrition dataset using Tableau desktop (A tool for visualization).

What is Employee Attrition?

Employee attrition refers to the loss of employees through a natural process, such as retirement, resignation, elimination of a position, personal health, or other similar reasons. With attrition, an employer will not fill the vacancy left by the former employee.

What Are the Different Types of Attrition?

There are five types of employee attrition that you need to know of:



1. Attrition due to retirement

If two or three people have retired from your company this year, this is statistically too small an employee group to count under attrition. However, if a sizable chunk of your workforce retires at the same time, this can cause attrition.

Attrition due to retirement shouldn't be swept under the rug – your senior professionals may choose to retire early or become independent consultants due to factors other than age.

2. Voluntary attrition

This is the most common type of attrition, where employees decide to simply quit their jobs. There can be many reasons for voluntary attrition (more on that later) and most of them are in your control.

You should proactively try to curb voluntary attrition among high-value talent, as this can bring down your productivity over time. For example, if a company sees its marketing experts moving out of different business units, it's a clear cause for concern

3. Involuntary attrition

In this scenario, it is the company and not the employee that initiates the exit. For example, the employee may have shown instances of misconduct in the workplace – a common reason for involuntary attrition. Structural reasons could also cause attrition. Mergers and acquisitions are often followed by a wave of involuntary attrition.

4. Internal attrition

Here, employees are quitting their jobs in one department to join another department. In some cases, internal attrition is desirable, as it routes talent towards more profitable areas. It also ensures better employee-job fitment.

But if a specific department has witnessed a high rate of attrition one year, it merits an investigation. Is there something missing in the job? Is the manager inadequately skilled? These are questioning that HR needs to ask and find answers to.

5. Demographic-specific attrition

This is a significant concern for progressive companies trying to build an equal-opportunities workplace. Demographic-specific attrition means that employees from a single group – women, ethnic minorities, people with disabilities, veterans, or older professionals – are leaving the company in droves.

You need to immediately deploy employee surveys to identify the root cause of demographics-based attrition before it affects your workplace culture. A positive culture can be the antidote to the quitting epidemic.

What Is Employee Attrition Rate?

Attrition measures how many people left a company/office/department compared to the average number of people employed in that year. This takes into account fresh hires as well. Here's a simple formula to help you calculate attrition:

Conduct a headcount to know how many employees you started with at the beginning of the year. Let's say this number is 1,000.

Keep track of how many people leave throughout the year. Let's say 200 employees left the company due to voluntary and involuntary reasons.



Keep track of the employees you hire across the year, and conduct a final headcount at year-end. Let's say that you hired 400 people that year – this means your final headcount is 1,400.

Now, calculate the average number of employees for that year. In our example, this will be $(1000+1400)/2 = 1,200$.

Finally, calculate the number of employees who left as a percentage of the average number of employees. This will give you the attrition rate: $(200/1200) \times 100 = 16.66\%$.

Simply put,

Attrition Formula


$$\text{Attrition Rate} = \frac{\text{No. of Employees that Left Workforce}}{\text{Average No. of Employees}}$$


Attrition Rate = Number of Attritions/Average Number of Employees

As you can see, the impact of attrition cannot be negated by going on a hiring spree. This is what makes it such an important metric for companies.

Four Factors Affecting Employee Attrition

The factors that cause employee attrition:

1. Personal motivation

There has been a change in an employee's personal life that compels them to switch jobs. New parents might want to move to a city with better schools, a mid-career professional may want to return to school – these reasons are endless.

By conducting detailed exit interviews, you can keep in touch with these employees and ensure that they consider your company in the future, whenever they have an opportunity.

2. Professional motivation

This is where HR could play a massive role in controlling attrition. An employee might leave because they felt there simply aren't enough opportunities for career progression in your organization. This is the case in several technology companies, where technical talent is forced to fight for managerial positions as they move up the ladder. Take inspiration from Microsoft, which created a long-term technical track to prevent professionally-motivated attrition.

3. Challenges with the workplace

This is another common reason for attrition. Challenges in the workplace can range from uncollaborative leadership to the lack of requisite tools for work.

This type of attrition is relatively easy to fix. Ask for regular feedback, listen to the voice of the employee, and address any gaps in their employee experience. Typically, someone who is happy with their job won't quit if most of their workplace requirements are met.

4. Poor employee-to-job fitment

We have all seen employees who join a company full of enthusiasm, only to leave a month or two later. This could be an indicator that the job was not right for that candidate, to begin with.

You can address attrition arising from this factor by finetuning your job descriptions as well as the onboarding process. Employees will know exactly what to expect, and you are less likely to witness new-hire attrition.

LITERATURE REVIEW

The review of some important earlier research studies on the present study is as mentioned below:

Sengupta Santoshi (2010) ²Carried Study on “Employee Attrition and Retention: Exploring the Dimensions in the Urban Centric BPO Industry”. He tried to examine the enormous significance to practitioners as it provides with guidance related to factors associated with attrition and also gives suggestions on employee retention. The study provides practitioners with key information that can enable them to take robust managerial decisions. The study found that Organizations should have a proactive retention strategy which helps in reducing employee turnover. Retention plan strategies should be different for different level of employees, because their roles are different; their needs are different; what motivates them are different and what makes them leave are also different. Based on the study it has been seen that dimensions of satisfaction and motivate are significantly different for employees on the basis of age, gender, marital status and education.

James M.J. (2011) ³studied “A study on human resource management in BPO with special reference to high employee attrition.” He tried to examine the variation in factors causing high employee attrition among different areas of BPO. He concluded that the factors namely lack of integration and goal setting, work atmosphere, dissatisfaction with rewards and hikes, dissatisfaction with salary and perks, food and relaxation and work and family conflict, affect employee attrition very significantly either at 1% or 5% level among the locations Karnataka and Kerala. Gupta Shaveta, Sukhmani, Kaur Harsimran (2011) ⁴studied about the “Retention Management and Cost of Attrition: A Keyword to Profitability” He tried to examine the employee retention approaches, strategies for retention and the cost related to attrition. He concluded that employee retention is a serious concern. In order to find and retain the right people for the job, business organizations need to redesign their reward and recognition packages according to the culture. There is no universal attrition management solution for every company. The cost of recruiting and hiring employees and low retention of valued employees are major expenses for most organizations. To avoid the damage and costly effects of increased turnover, organizations need to act now to improve their retention efforts.

Kumudha A., Saranya R (2012) ⁵ carried study on “An Empirical Study on Attrition & Employee Retention Initiatives with Reference to Flow Link Systems Private Limited,

Coimbatore” He tried to examine the employee attrition and retention factors as well as the employer, employee relationship in the Flow Link Systems Private Limited, Coimbatore. He concluded that the working environment is highly satisfied for the employees who can be maintained to improve the morale of the employees. It has also revealed from the research that the organization has to concentrate on workload and lead time, relationship between colleagues and supervisors, internal recruitments to retain the employees and reduce attrition. This research gave insight knowledge about the HR practices of the organization and retention strategies of the concern.

OBJECTIVES

- To analyse the attrition rate in different job roles.
- Comparative attrition rate analysis between different job roles.
- To analyse the attrition rate is more whether in those employees who worked in lesser or a greater number of companies.
- To analyse whether the attrition rate is more in freshers or experienced employees.
- To analyse the attrition rate under the current manager.

DATA ANALYSIS

Data:

Dataset used in this project is taken from Super Data Science team.

Tableau - Employee Attrition(final)

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Files

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HR...sv

New Union

HR Analytics Data

Connection

Live

Extract

Filters

0Add

Sort fields

Data source order

Show aliases

Show hidden fields

1,000

rows

#	Age	Attrition	Business Travel	Daily Rate	Department	Distance From Home	Education	Education Field	Employee Count	Employee ID
	35	No	Travel_Rarely	809	Research & Development	16	3	Medical	1	
	29	No	Travel_Rarely	153	Research & Development	15	2	Life Sciences	1	
	31	No	Travel_Rarely	670	Research & Development	26	1	Life Sciences	1	
	34	No	Travel_Rarely	1,346	Research & Development	19	2	Medical	1	
	28	Yes	Travel_Rarely	103	Research & Development	24	3	Life Sciences	1	
	29	No	Travel_Rarely	1,389	Research & Development	21	4	Life Sciences	1	
	32	No	Travel_Rarely	334	Research & Development	5	2	Life Sciences	1	
	22	No	Non-Travel	1,123	Research & Development	16	2	Medical	1	
	53	No	Travel_Rarely	1,219	Sales	2	4	Life Sciences	1	
	38	No	Travel_Rarely	371	Research & Development	2	3	Life Sciences	1	
	24	No	Non-Travel	673	Research & Development	11	2	Other	1	
	36	Yes	Travel_Rarely	1,218	Sales	9	4	Life Sciences	1	

Data Source

KPI

Attrition by Job Role

Attrition wrt Last Promotion

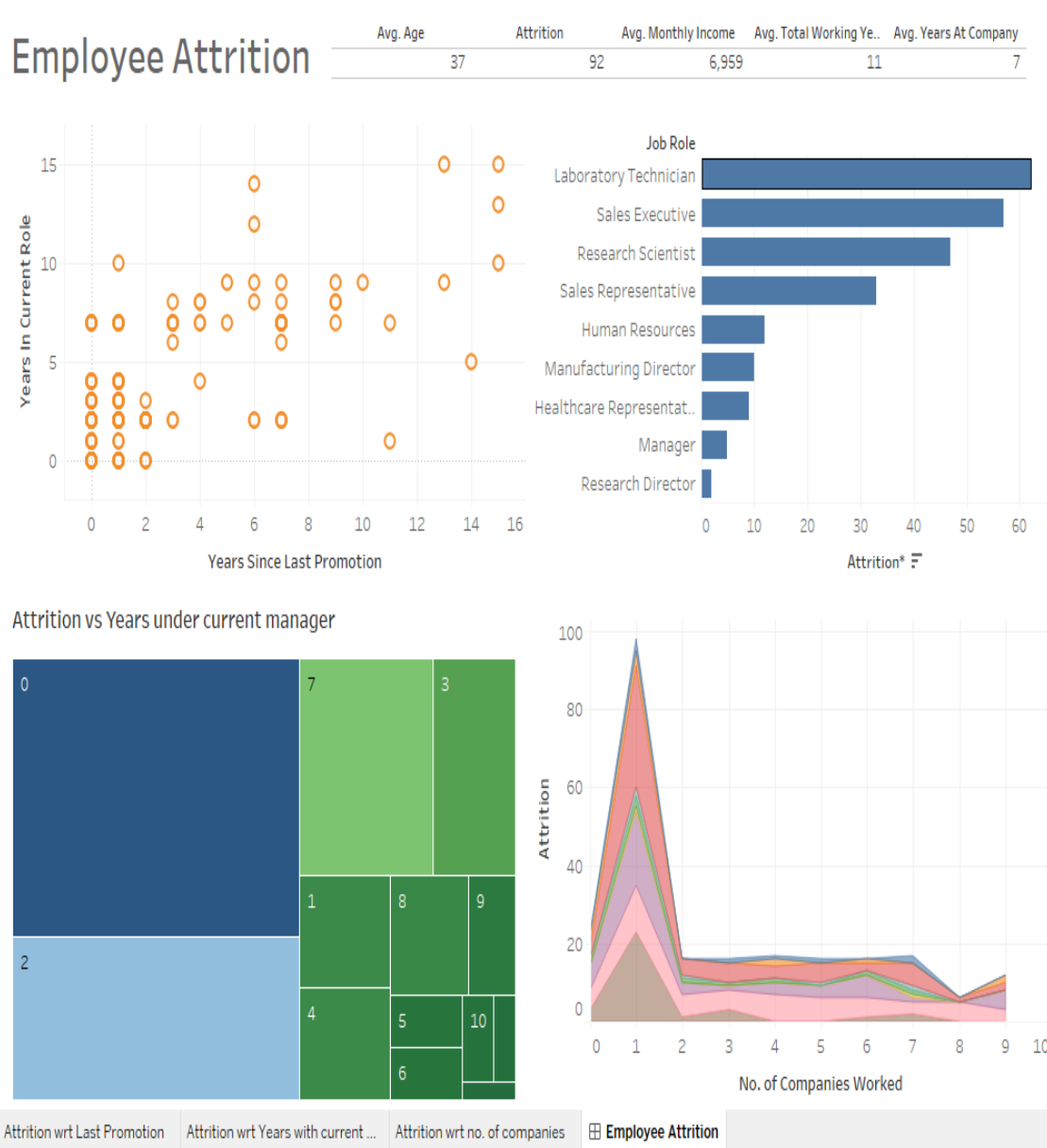
Attrition wrt Years with current ...

Attrition wrt no. of companies

Employee Attrition

Visualizations:

Following are the visualization of Employee Attrition Analysis:

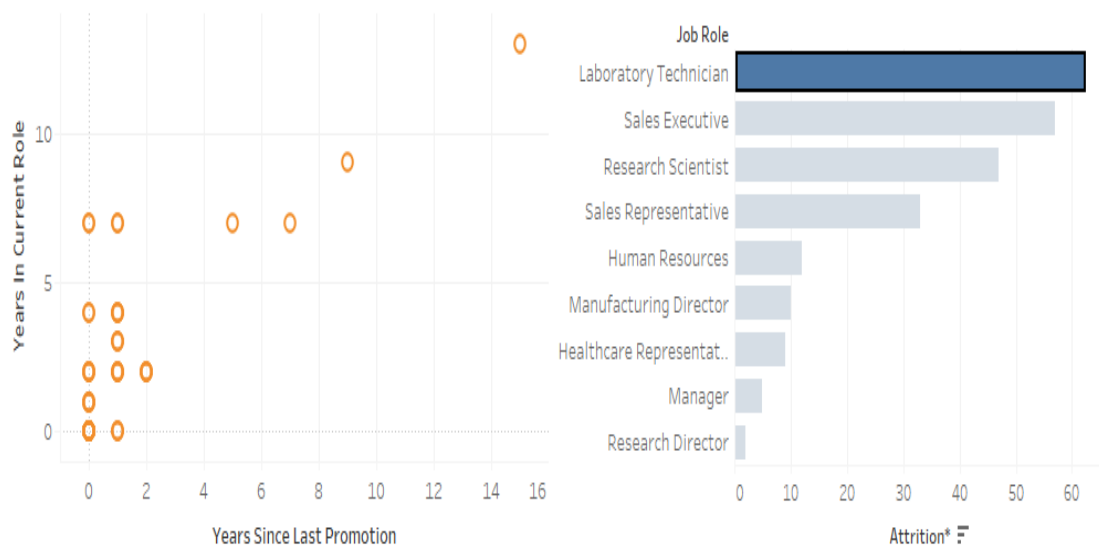


Dashboard (fig. 1)

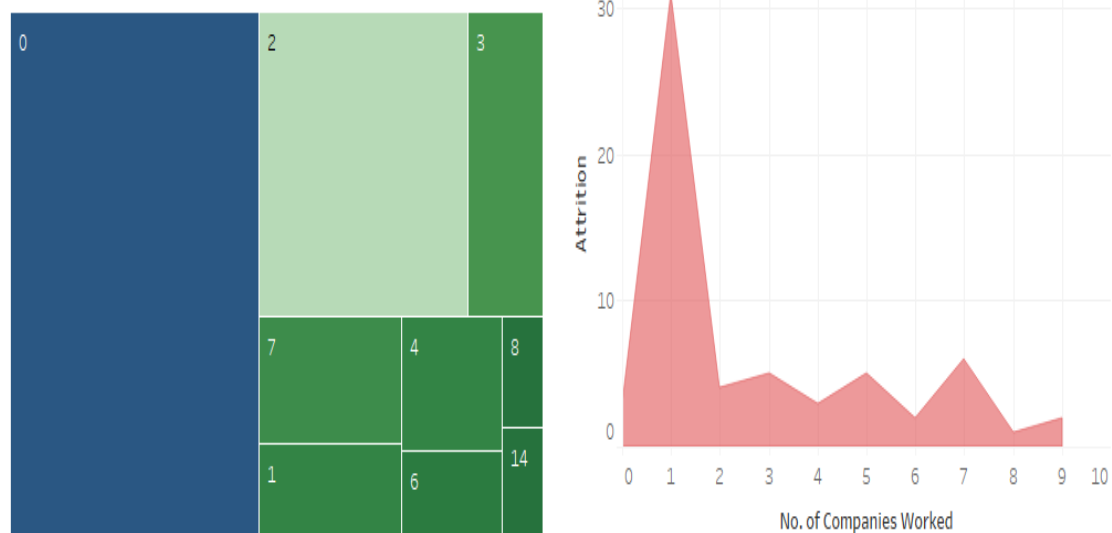
Employee Attrition vs Job Role

➤ Laboratory Technician:

Employee Attrition



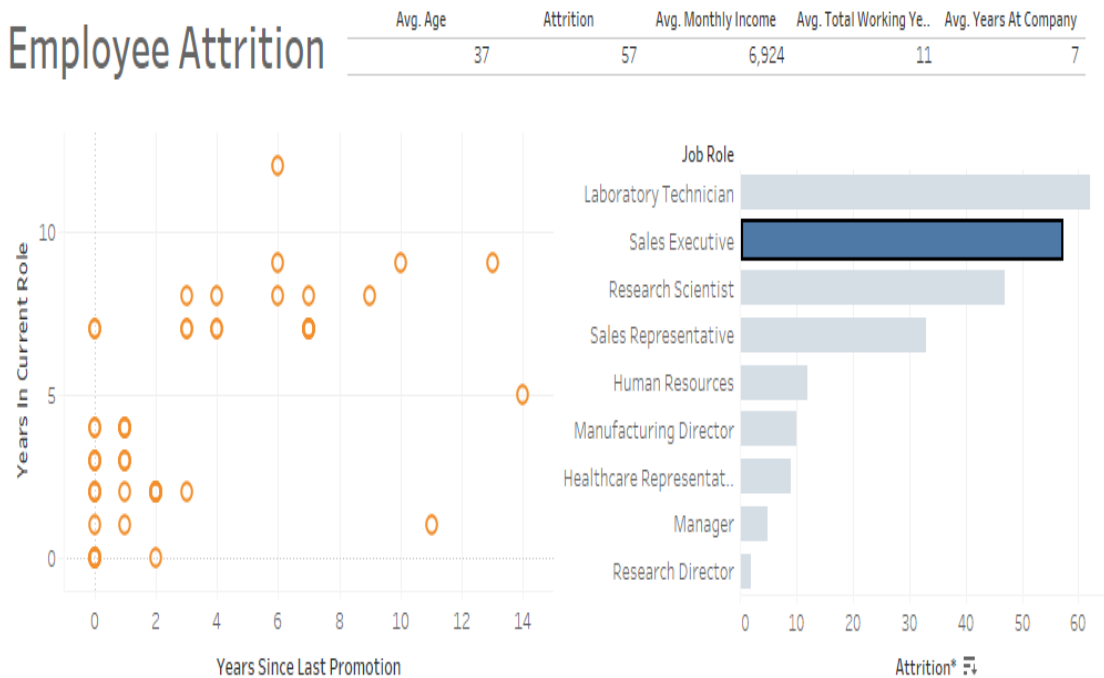
Attrition vs Years under current manager



Laboratory Technician (fig. 2)

➤ Sales Executive:

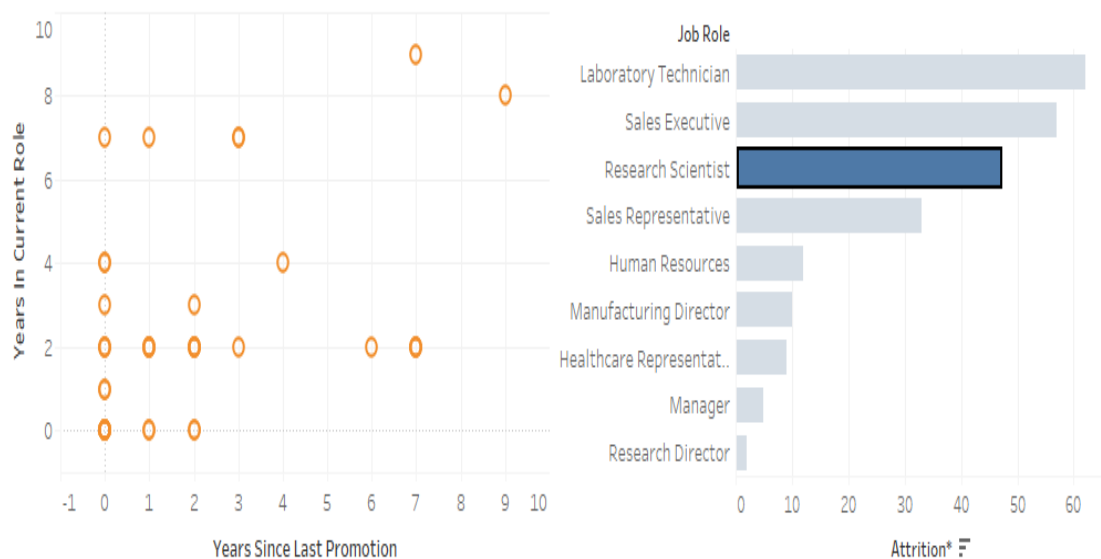
Employee Attrition



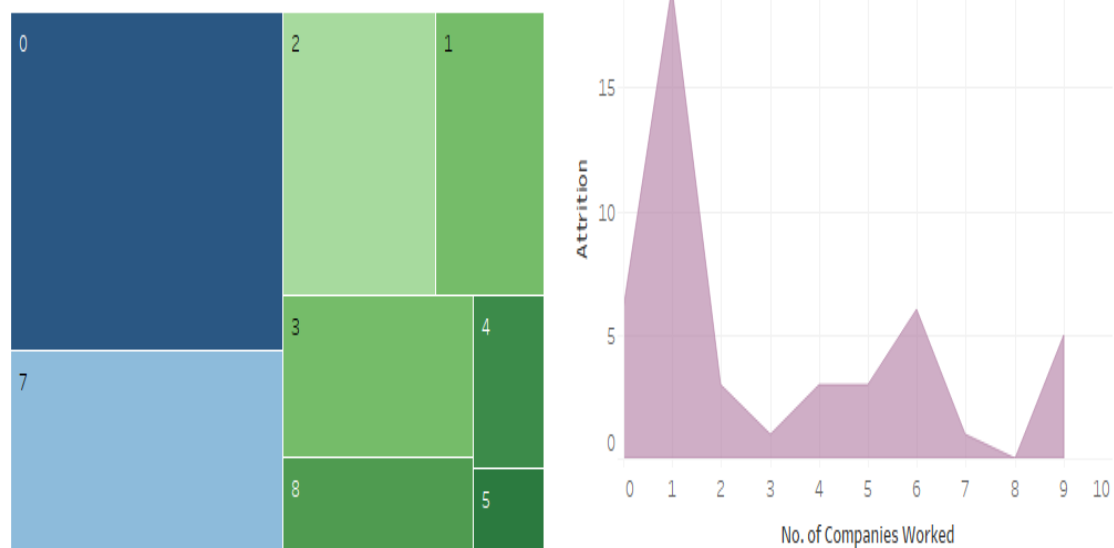
Sales Executive (fig. 3)

➤ Research Scientist:

Employee Attrition



Attrition vs Years under current manager

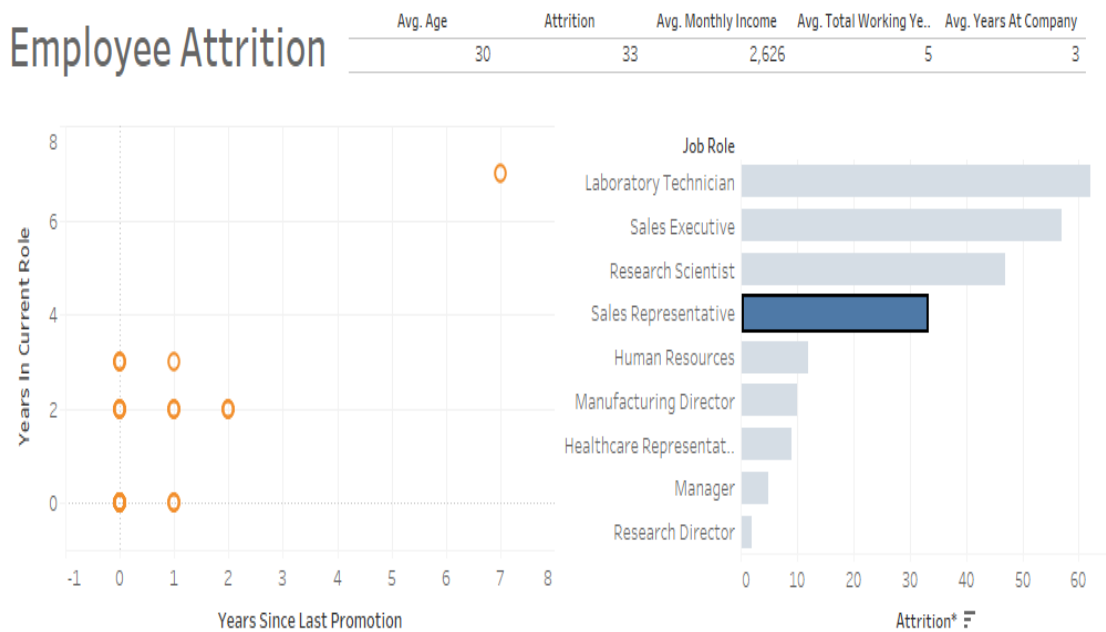


KPI Attrition by Job Role Attrition wrt Last Promotion Attrition wrt Years with current ... Attrition wrt no. of companies Employee Attrition

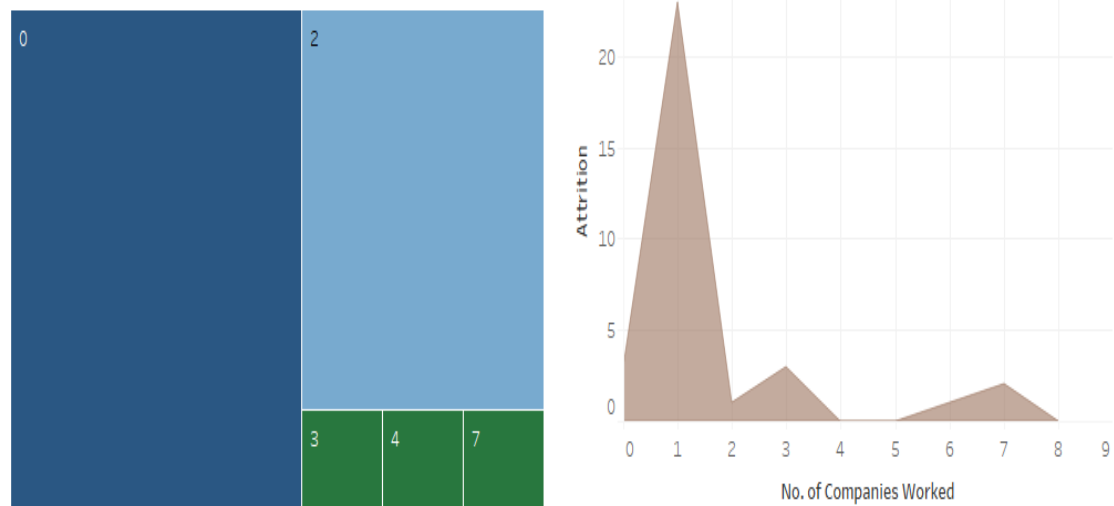
Research Scientist (fig. 4)

➤ Sales Representative:

Employee Attrition



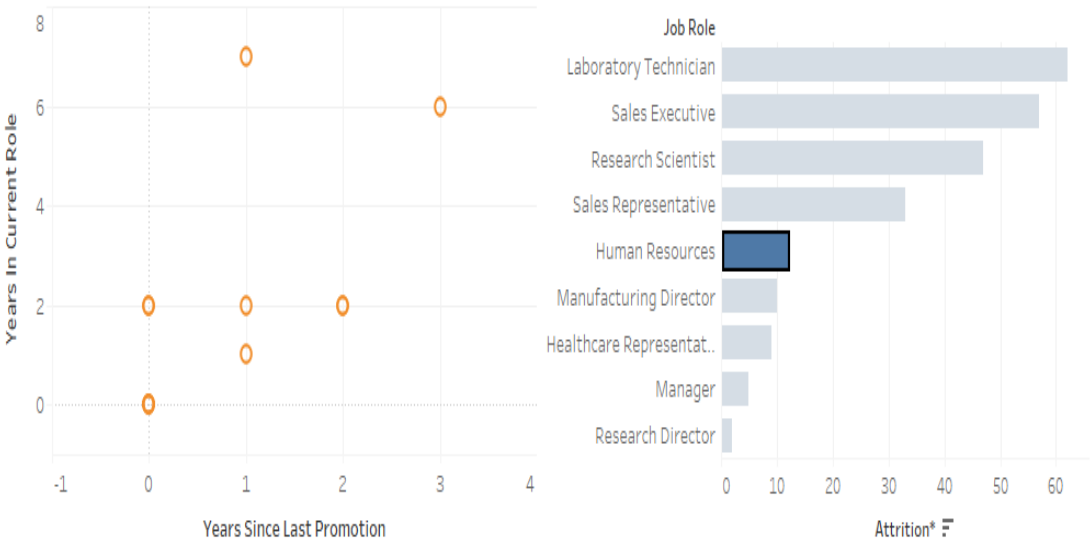
Attrition vs Years under current manager



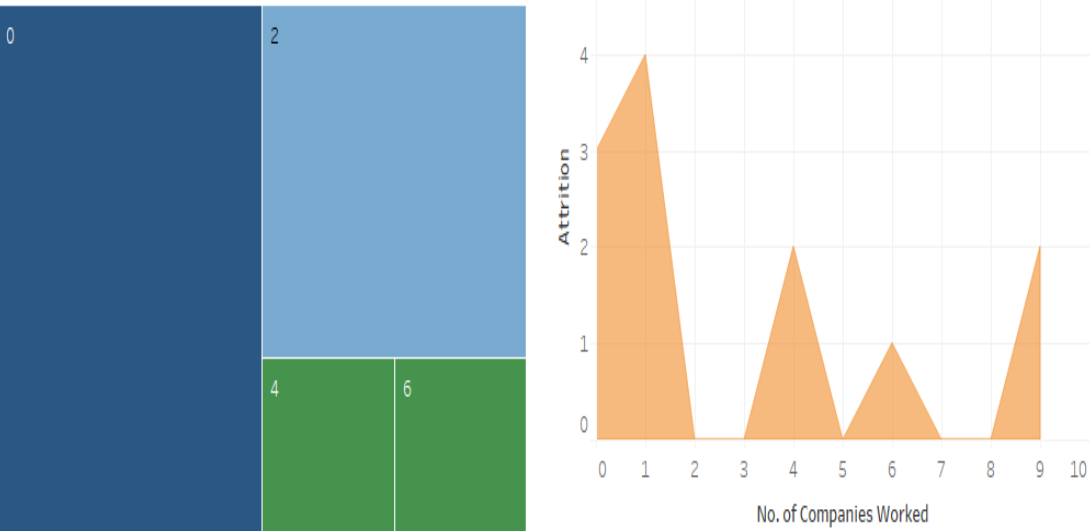
Sales Representative (fig. 5)

➤ Human Resources:

Employee Attrition



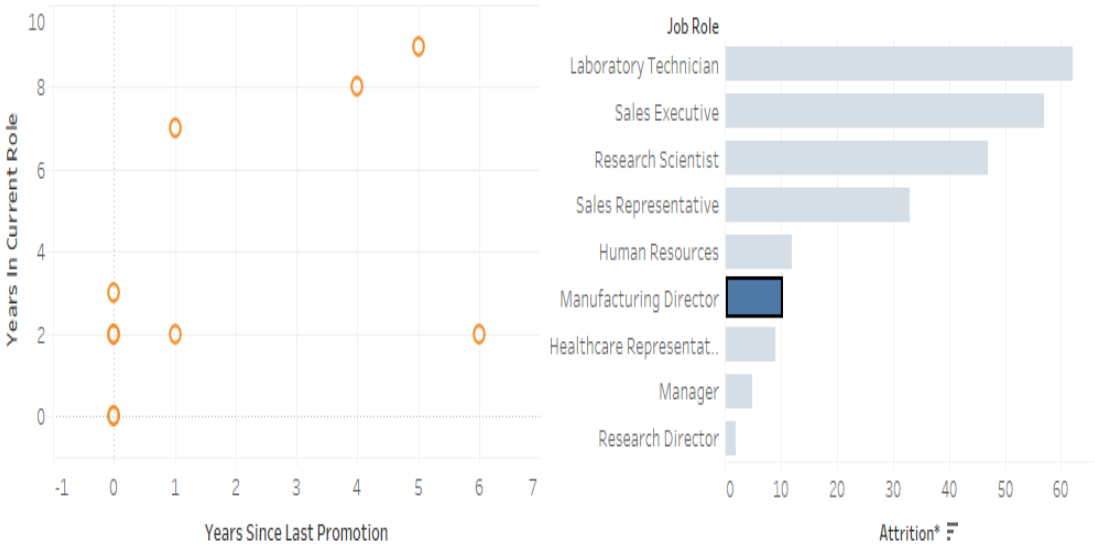
Attrition vs Years under current manager



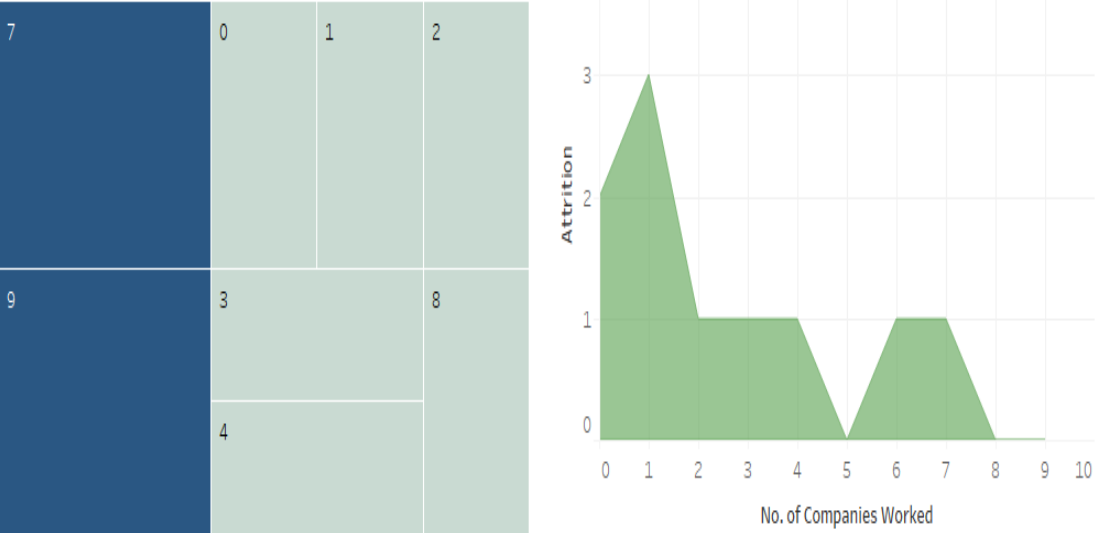
Human Resources (fig. 6)

➤ Manufacturing Director:

Employee Attrition



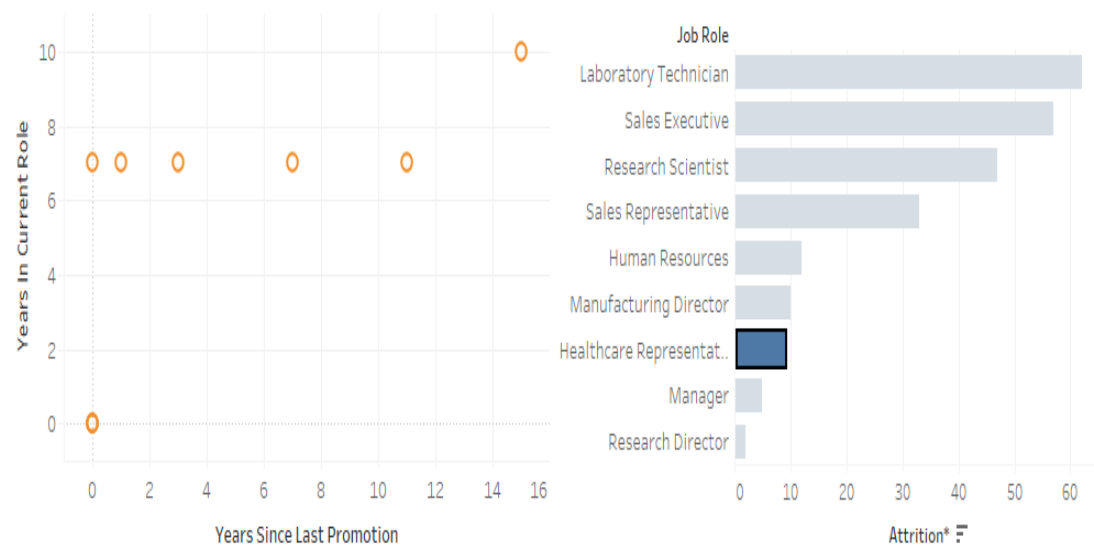
Attrition vs Years under current manager



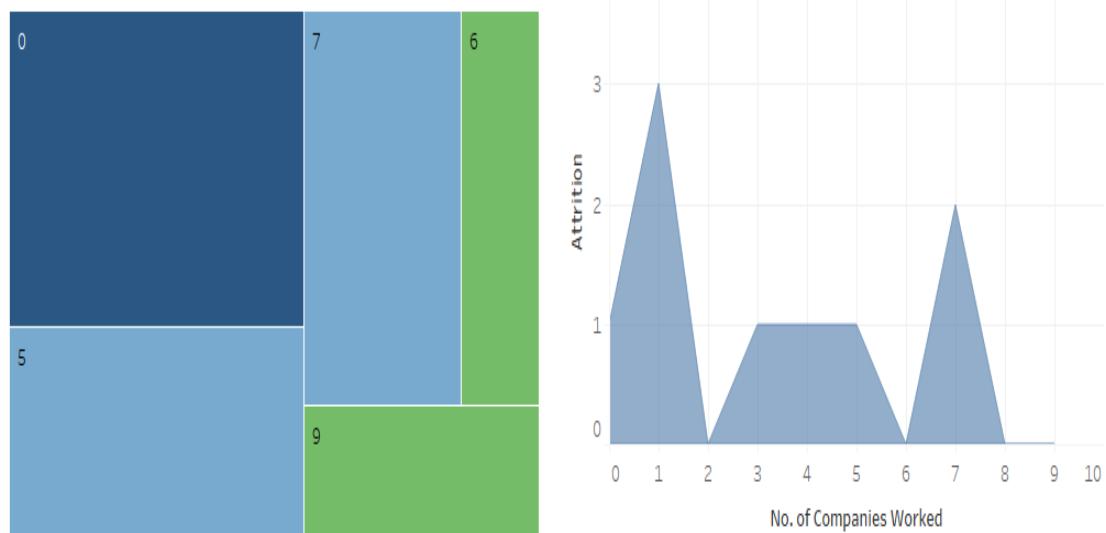
Manufacturing Director (fig. 7)

➤ Healthcare Representative:

Employee Attrition



Attrition vs Years under current manager

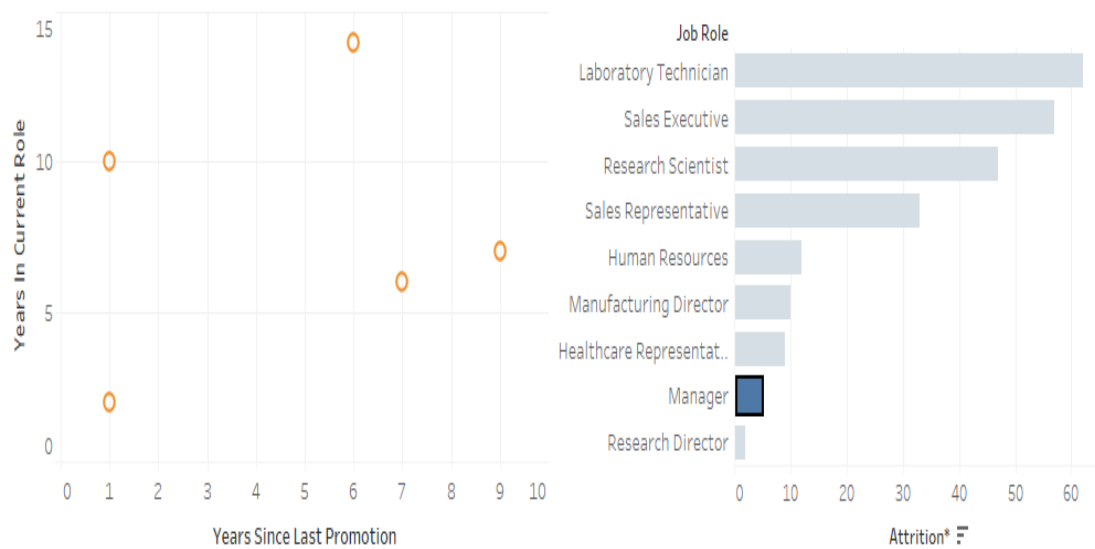


Healthcare Representative (fig. 8)

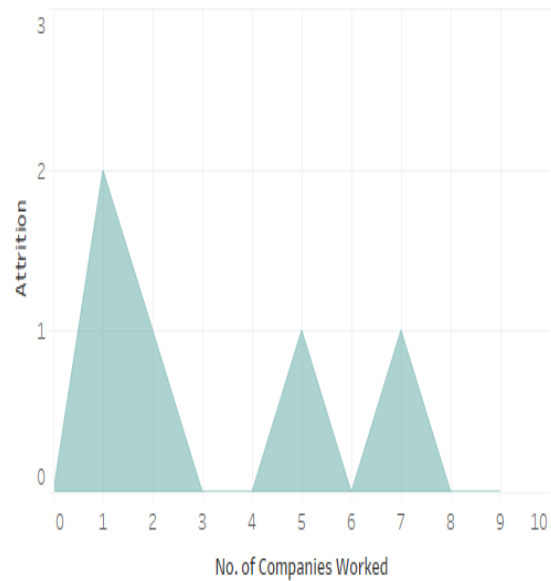
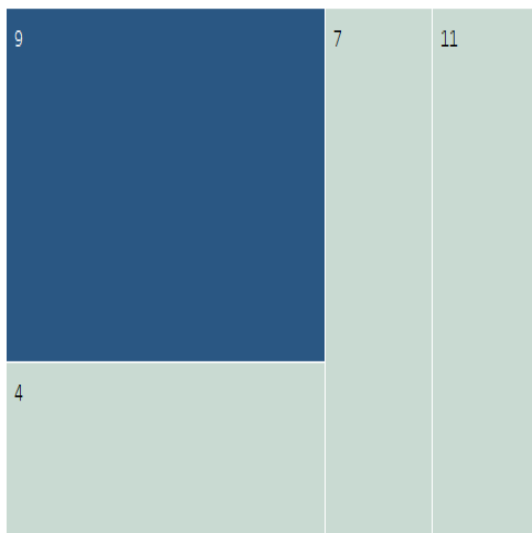
➤ Manager:

Employee Attrition

Avg. Age	Attrition	Avg. Monthly Income	Avg. Total Working Ye...	Avg. Years At Company
47	2	16,987	26	15



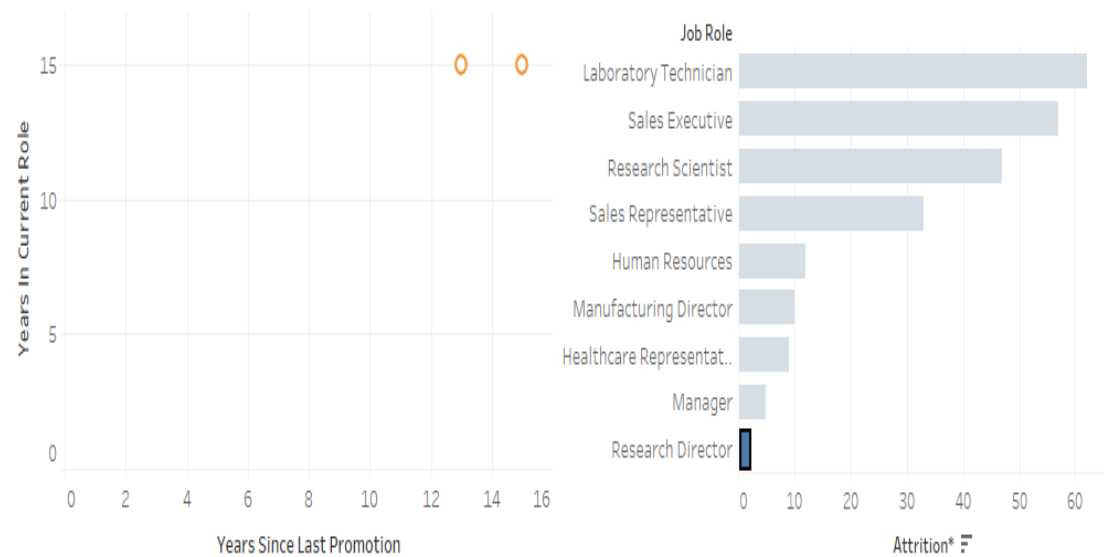
Attrition vs Years under current manager



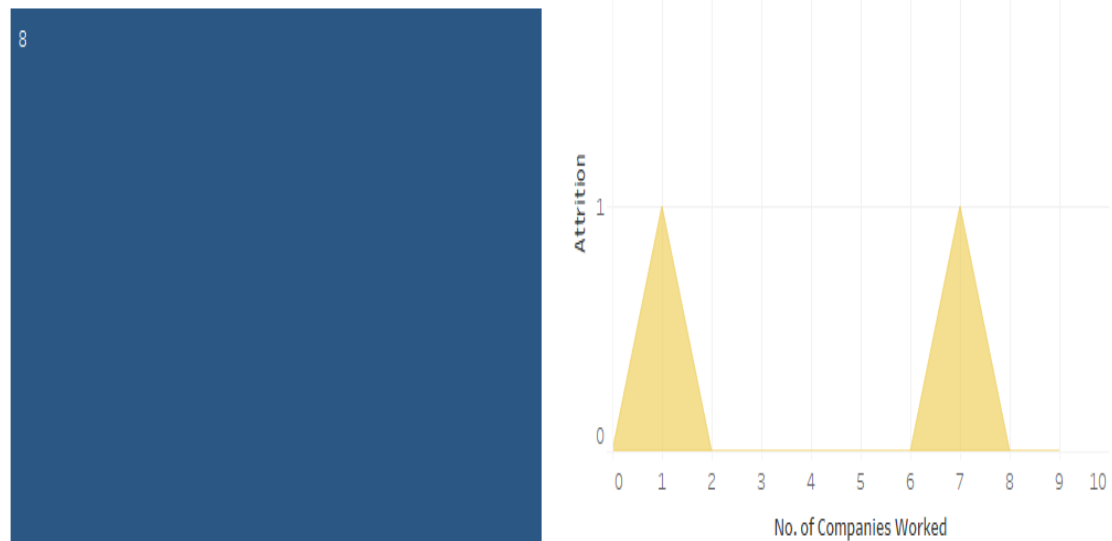
Manager (fig. 9)

➤ Research Director:

Employee Attrition



Attrition vs Years under current manager



Research Director (fig. 10)

Analysis:

- In fig 2 it is seen that the Employee Attrition rate is maximum in the job role of Laboratory technician.
- From fig 2 to fig 8, it is seen that the Employee Attrition rate is more in inexperienced employees than experienced employees.
- From fig 2 to fig 8, it is seen that the Employee Attrition rate is more in those employees who worked in a lesser number of companies than those who worked in greater number of companies.
- In fig 9, it is seen that Employee Attrition Rate is just double in those employees who worked in lesser number of companies than those who worked in greater number of companies.
- In fig 10, it is seen that Employee Attrition Rate is minimum in the job role of Research Director.
- In fig 10 it is also seen that Employee Attrition Rate in job role of Research Director is equal in those who worked in less as well as more no. of companies.
- In fig 10, it is seen that Employee Attrition Rate of Research Director under the current manager is 8.

RESEARCH METHODOLOGY

Data Source:

The dataset is taken from a web site called ‘www.data.world.com’ on which there is different types of dataset of different organizations on which we can do different data analysis project. Since the report requires the analysis of Employee Attrition dataset. From ‘www.data.world.com,i got the dataset of Employee Attrition.

Research Design:

“A research design is the arrangement of conditions for collection and analysis data in a manner that aims to combine relevance to the researcher purpose with economy in procedure”. It constitutes the blueprint for the collection, measurement and analysis of data. As such the design includes an outline of what the researcher will do form writing the hypothesis and its operational implication to the final analysis of data. more explicitly, the design decisions happen to be in respect of:

- What is the study about?
- Why is the study being made?
- Where will the study be carried out?
- What type of data is required?
- Where can the data be found?
- What periods of time will the study include?
- What will be the sample design?
- How will the data be analyzed?
- In what style will the report be prepared?
- What techniques of data collection will be used?

The Research Design undertaken for the study based on Data Analysis. A study in which we do data collection, data transformation, data visualization and data analysis and I made all my visualizations by using Tableau desktop which is a software on which we can do data transformation, data visualization and data analysis.

LIMITATIONS

- The dataset is taken from a web site, not by taking direct surveys from any organization.
- All the processes like data transformation, data visualizations, and data analysis is done by myself so it can't be 100 % accurate because it may contain some human errors.
- Name of the organization is not disclosed by the web site 'www.data.world.com', from which I got the dataset, on the basis of which I made this project as the Attrition data of an organization is confidential.

SUGGESTIONS

Following are some of the suggestions by which Attrition rate can be minimized in an organization according to me:

- As maximum number of employees who left the company are freshers may be for the better salary so company should give hike in their salary at regular time interval.
- The other reason can be, as per their salary work load is too much for employees so the company should decrease the workload from the employees.
- Work environment can also be one of the reasons for employee attrition so a good working environment should be maintained in the company.
- Miscommunication between employees and higher administrative can also be one of the reasons for employee attrition so proper communication should be there between employees and higher authorities for a sound working environment.
- Employees Attrition can also be minimized if the employees rewards and recognition for their work time to time.
- Higher authorities must provide opportunities for employee's growth and development.

CONCLUSIONS

After analyzing all the visualizations, following attrition trend is seen in different job roles mentioned above:

- Attrition is seen more in employees who worked in lesser no. of companies.
- Attrition is seen more in freshers in compare to experienced employee.
- Employee attrition is maximum in laboratory technician followed by sales executive, research scientist, sales representative, human resources, manufacturing director, healthcare representative, manager and least in research director.

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