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Employee Turnover Insights

Group No. 2 [D3 - D4]

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Through data quality checks, exploratory data analysis (EDA), and clustering of employees who have left, we aim to identify the most influential factors leading to turnover. Additionally, based on our findings, we will propose tailored retention strategies to address the specific needs of targeted employees, ultimately fostering a positive work environment and reducing employee turnover for Portobello Tech.

Employees were surveyed on various aspect like employee satisfaction , time spent at work , work accident , promotion , salary .

DATASET

- satisfaction_level: Employee satisfaction level
- last_evaluation: Last evaluation
- number_project: Number of projects
- average_monthly_hours: Average monthly hours
- time_spend_company: Time spent at the company
- Work_accident: Whether they have had a work accident
- promotion_last_5years: Whether they have had a promotion in the last 5 years
- sales: Department
- salary: Salary
- left: Whether the employee has left

INSIGHTS

01

Employees from the HR department are leaving the highest based on the normalized data. The HR department has the highest percentage.

02

The employees from the sales department are leaving the highest if we look at only the count of leaving people.

03

People with Lower Salaries are leaving the company.

04

People with experience of 3 to 5 years are leaving the company more.

05

People who have worked on 3 or 4 projects have left the organisation more.

INSIGHTS

06

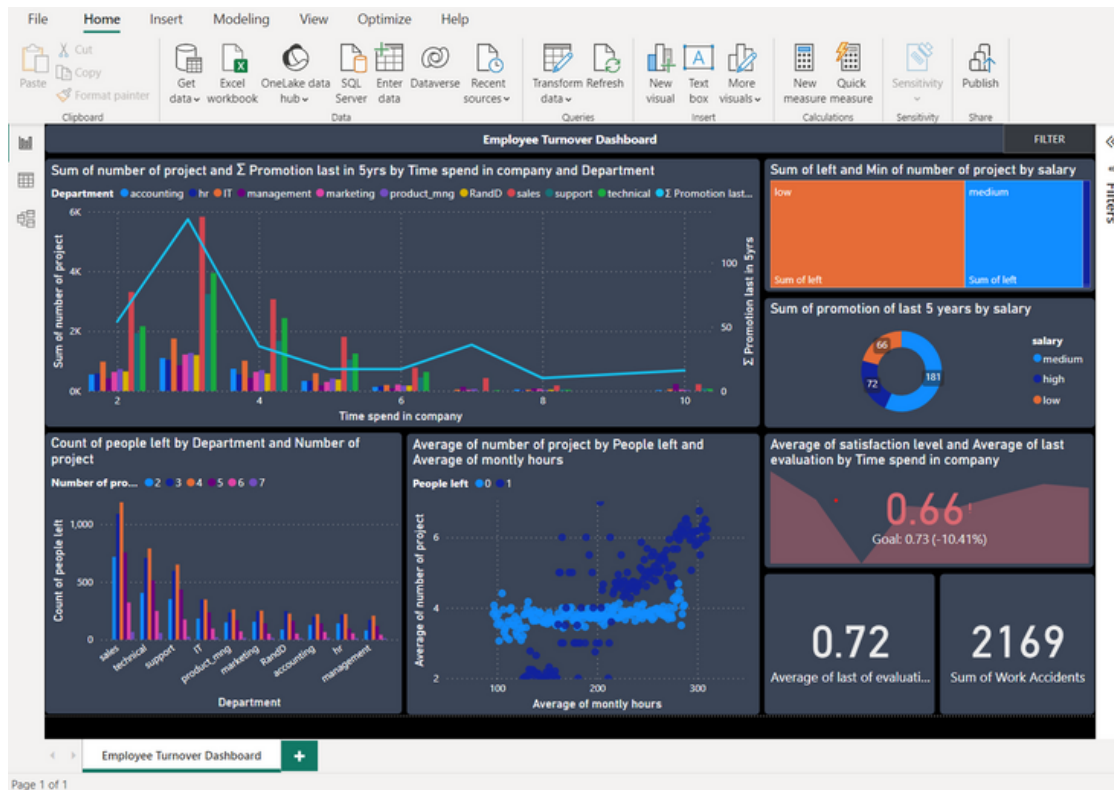
Looks like people who have been with the company for some time and also haven't received a raise in their time with the company are far more likely to leave. Nothing super interesting with the relation between salary and number of projects. Higher salary attrite less and still, more projects tend to attrite more. It would seem most promotions occur for people in management (though whether the promotion is what put them there I'm not sure) but then more interestingly, we see that most promotions occur for people with either very few projects or a lot (though none for the 7 project folks).

07

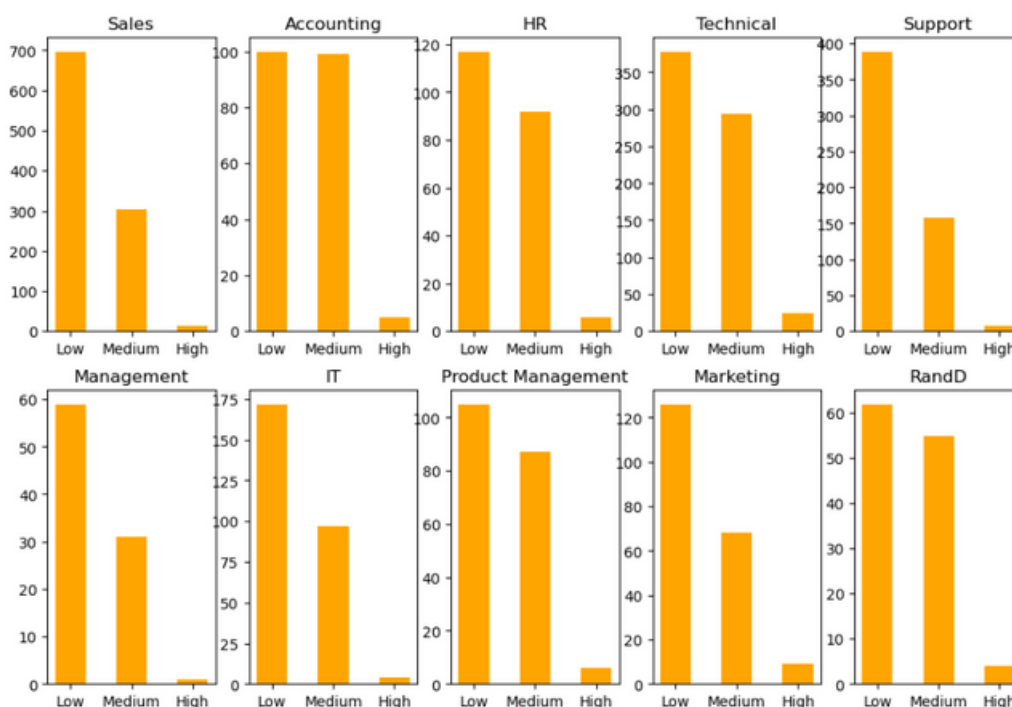
People who have spent 2 years are not leaving the company. But as experience grows people start leaving and highest after they spend 5 years in the company. But once they cross the golden years '7', they are not leaving.

VISUALISATION

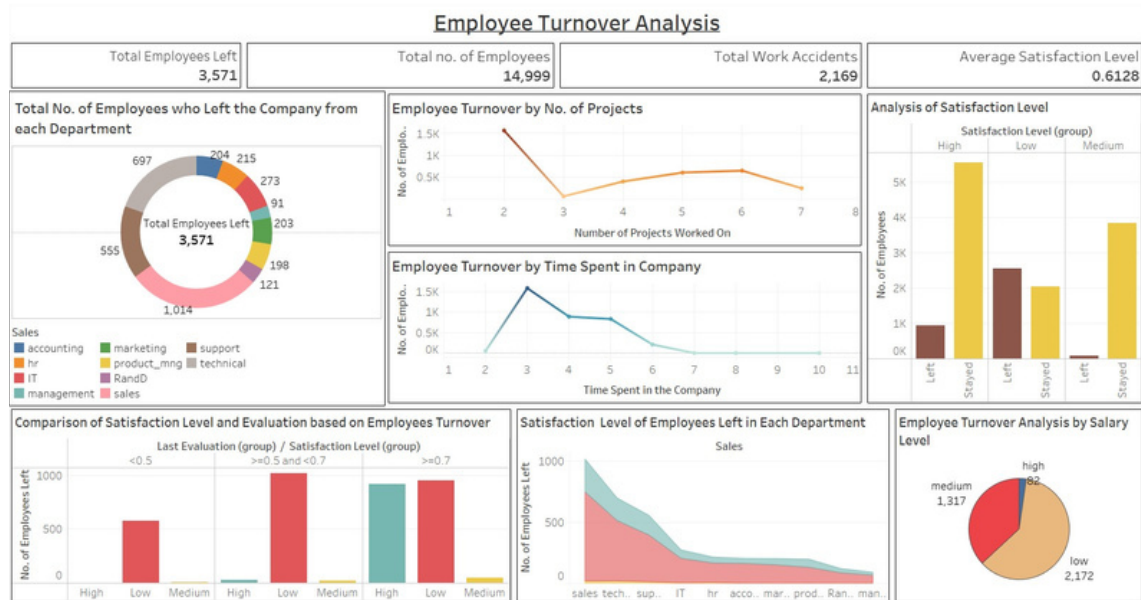
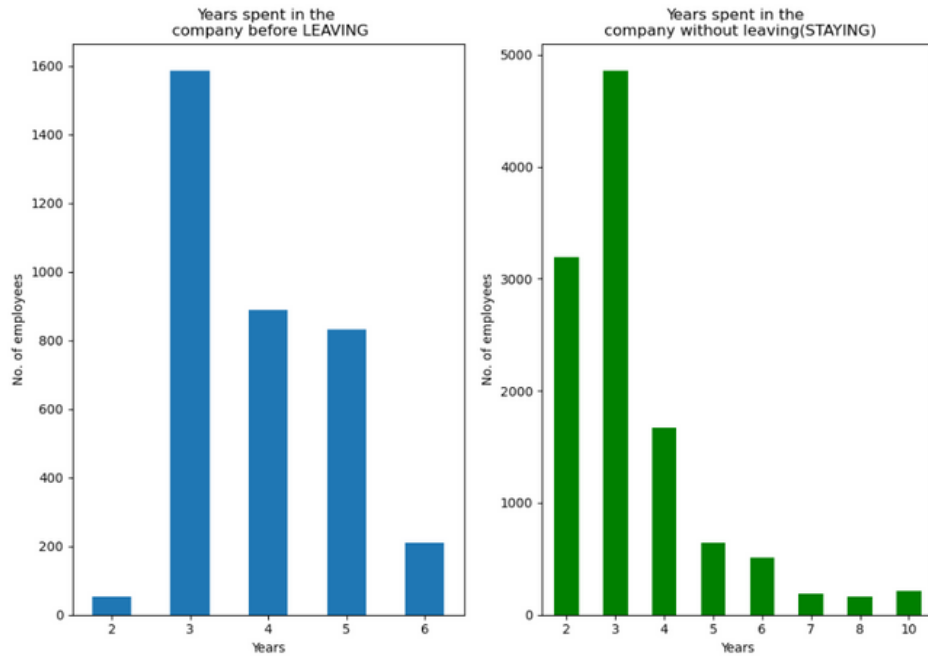
We performed the visualisation of the Employees Turnover (HR_comma_sep.csv) data in python, tableau and power bi to get a proper analysis of the data.



LEAVE BY SALARY BY DEPT



VISUALISATION



RECOMMENDATIONS

What would business recommendations be?

01

You could create an attrition watchlist that comes out at some cadence. Would require a different dataset that is time-based and your features could be similar but would also involve time-series trends so for example, if someones performance starts to deteriorate, could that indicate something?

02

People who gets promotion in 5 years are likely to stay in company, compared to people who are not promoted.

03

As soon as people hit the 3 year mark, there likelihood of attriting becomes higher than average, therefore those are folks we might want to keep an eye on. Especially the 4th and 5th years. This could involve more consideration for where their salary level is at, relative to the national average for someone of their skillset as staying at one job typically results in lower pay over time.

04

Employee satisfaction surveys are a very easy one to see if there are any large areas we can identify that might be causing dissatisfaction. It's cheap and easy and gets at our most important feature.

05

Utilize exit surveys of employees that have left to better understand what the issues were and either address those issues, if it's that simple, or figure out how to incorporate that type of thing into the model to better identify the next person.

CONCLUSION

As the Data Analyst assigned to the HR Department, We have conducted several analyses and identified key insights into employee turnover



Data Quality Check

- Before conducting any analysis, We performed a data quality check and verified that there were no missing values in the dataset. This ensured that we had a complete and reliable dataset to work with for further analysis using python.

Factors Contributing to Employee Turnover

- Using Exploratory Data Analysis, We examined the relationship between employee turnover and various attributes in the dataset. Through this analysis, We identified the most significant factors contributing to employee turnover:



Suggested Retention Strategies

- Employee Engagement Programs
- Performance Management
- Workload Balancing
- Career Development
- Safety and Well-being
- Recognition and Rewards
- Promotions and Internal Opportunities

Improving employee satisfaction, providing growth opportunities, and addressing workload concerns will help create a positive and nurturing work environment, ultimately reducing employee turnover and retaining valuable talent within the organization.