HR Project

DMRZ Analytics Team

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TIMELINE

- **The Benefits & Challenges of Using HR Analytics**

- **Project Objective**

- **Data Cleaning & Transformation**

- **Company Profile Insights and Analysis**

- **Attrition Insights and Analysis**

- **Performance Insights and Analysis**

- **Conclusion and Recommendations**

The Benefits of Using HR Analytics

Improve Talent Acquisition

Increase Staff Retention

Improve Employee Experience

Accurately Identify Skill Gaps in Your Organization

Increase Workforce Productivity

HR Analytics

The Challenges of Using HR Analytics

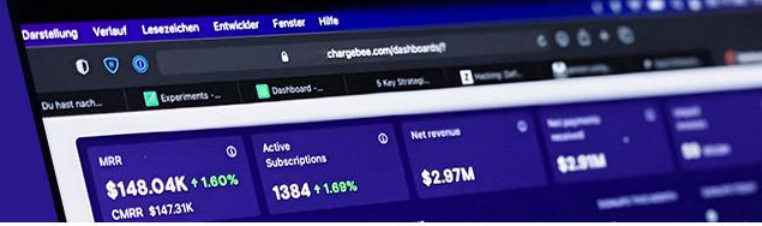Consolidating Data from Different Departments and Third-party Sources

Privacy and Compliance Challenges

Insufficient IT Resources for HR Data Analytics

Inability to Access Quality Data

Potential Data Bias

HR Project Objective

❑ This HR project aims to provide comprehensive insights into employee demographics, performance, satisfaction, and attrition trends through visualized data.

❑ The goal is to enhance decision-making by identifying key patterns in workforce composition, job satisfaction, and attrition.

❑ This will allow for better workforce management, employee retention strategies, and targeted training opportunities, ultimately improving organizational performance.

Data Cleaning & Transformation
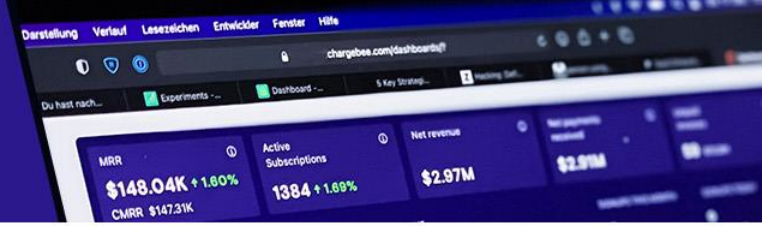
1. Match Education Degree with Educational Level:

❑ Use the **VLOOKUP** formula in Excel to align each employee's education degree with their corresponding educational level.

2. Calculate Average Performance:

❑ Group the performance data by employee and calculate the average performance rating for everyone.

3. Replace Codes with Descriptive Legends:

❑ Replace coded values in the dataset (e.g., satisfaction and rating codes) with their descriptive counterparts from the legends.

4. Full State Name Replacement:

❑ Replace state abbreviations in your dataset with the full state names for clearer reporting and analysis.

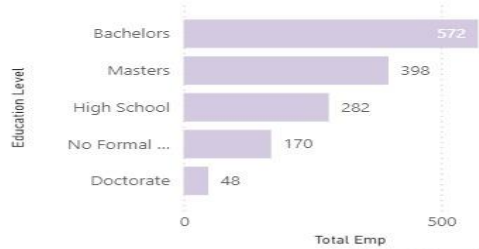# Company Profile

Overview of HR Insights

❑ **This dashboard provides a detailed look at employee demographics and attrition.**

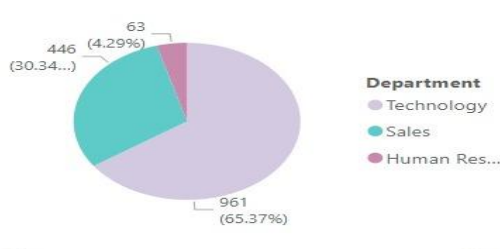❑ **It helps identify trends and areas of improvement within the workforce.**
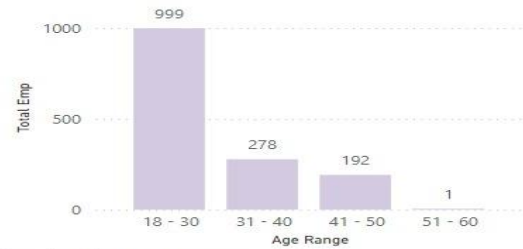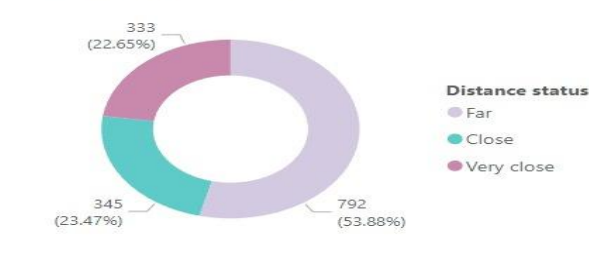
Analysis Insights:
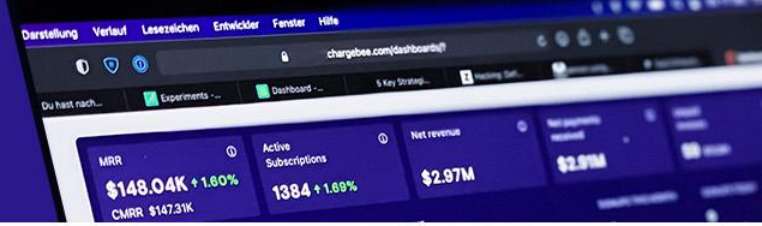
Employee Demographics

Who Are Our Employees?

- Total employees: 1,470
- Age Distribution: 18-30 (999), 31-40 (278), 41-50 (192), 51-60 (1)
- Gender: Female (51%), Male (49%)
- Education: Majority holds Bachelor's (572) and Master's (398) degrees
- Ethnicity: Predominantly White (860), followed by Black/African American (207)

Employee Distance to Workplace

Workplace Commute Insights:

- Employee proximity: Far (53.88%), Close (23.47%), Very Close (22.65%)
- Long commutes might be linked to higher dissatisfaction or attrition.

Departmental Breakdown

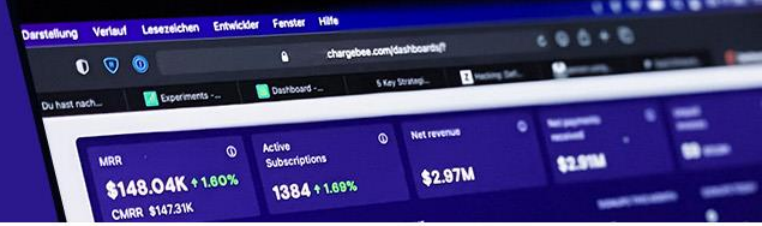Employee Distribution by Department:

- Technology: 65.37%
- Sales: 30.3%
- HR: 4.29%

Promotion and Training Opportunities

Career Development:

- Promotion: 808 employees due for promotion
- Training: 14,000 opportunities, 6,825 taken (Training Utilization= 50.54%)
- More training can help boost promotion-readiness and performance.

Analysis trends

- The workforce has almost an equal balance of men and women, with most employees (68%) being between 18-30 years old. The Technology department has the largest group, making up 65.37% of the staff.

- Only 50.54% of employees are using available training programs, suggesting more could participate.

- 237 employees (16.12%) may leave the company, while 808 are ready for promotion.

- The company has a mix of employees from different backgrounds, but the majority (58.5%) are White.

- Over half of the employees (53.88%) live far from work, which could affect their engagement with the company.
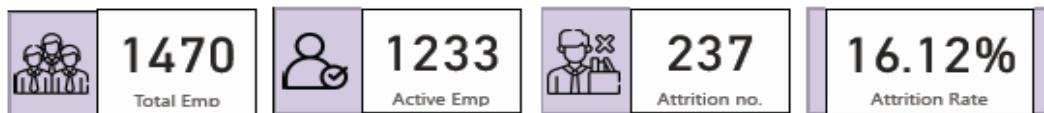
Company Avg Salaries

- This HR dashboard shows insights related to salary. The key metric at the top is the average salary, which is $112.96K. The dashboard analyzes factors influencing salary decrease, highlighting the job roles contributing to this trend.

- The chart on the left shows that the average salary decreases by:

- $76.63K when the job role is Sales Representative.

- $76.56K when the job role is Recruiter.

- $76.24K when the job role is Software Engineer.

- $69.16K when the job role is Data Scientist.

- On the right, there's a bar chart comparing the average salary across different job roles. It shows that HR Managers have the highest salaries, while Recruiters and Sales Representatives tend to have lower salaries.
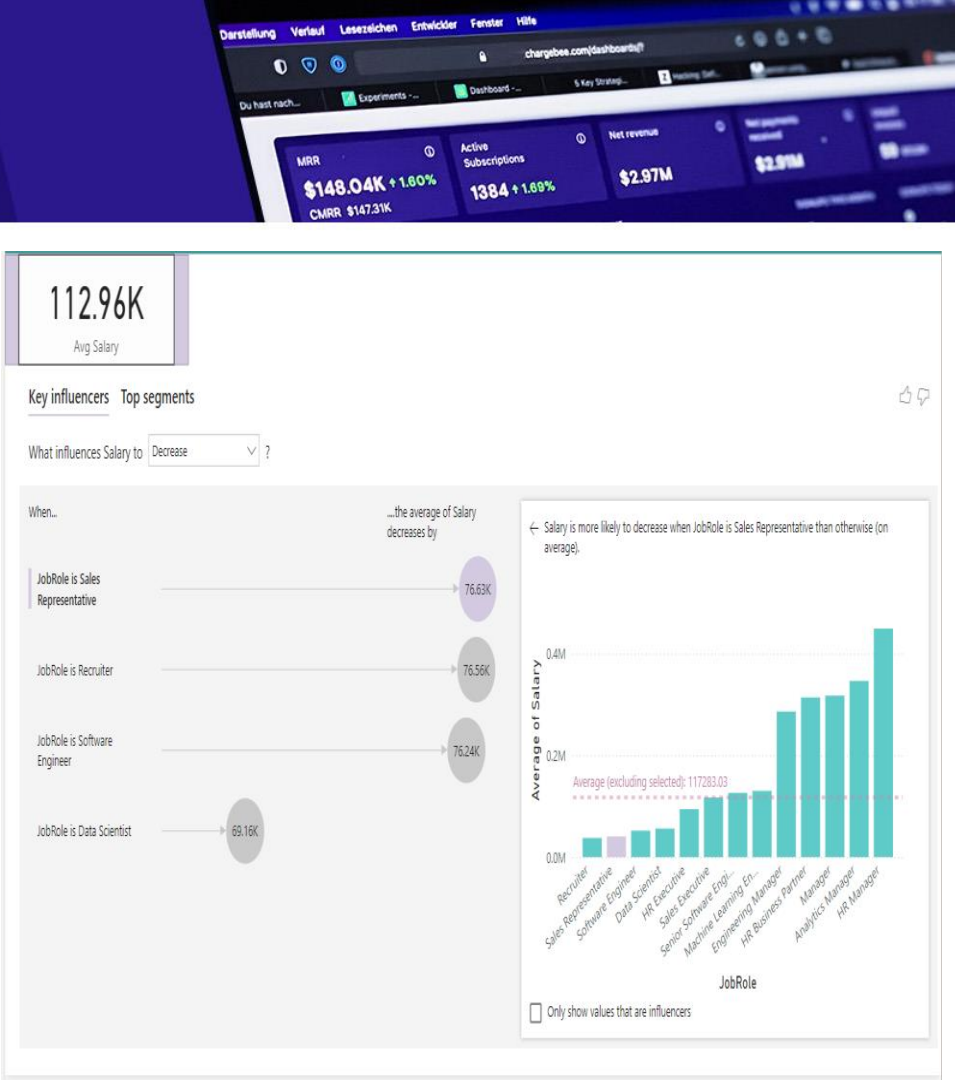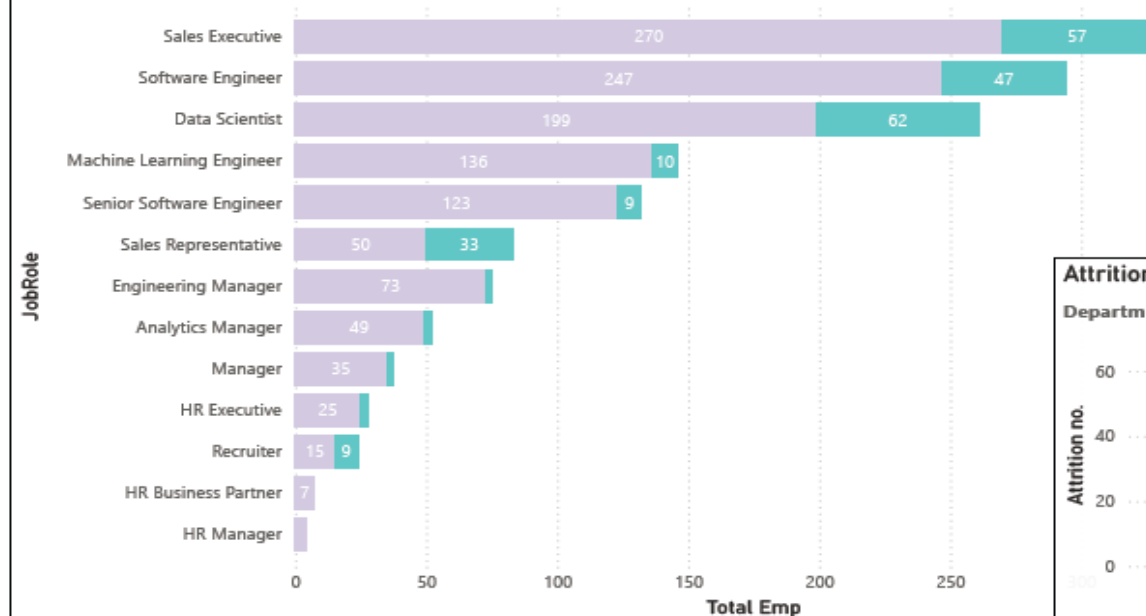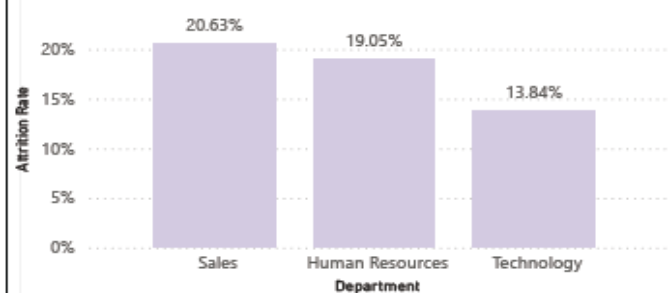
Employees Attrition

Attrition Analysis

1470 Total Emp	**1233** Active Emp	**237** Attrition no.	**16.12%** Attrition Rate

Departments

Human Resources	Sales	Technology

Employees by JobRole

Attrition ● No ● Yes

JobRole	No	Yes
Sales Executive	270	57
Software Engineer	247	47
Data Scientist	199	62
Machine Learning Engineer	136	10
Senior Software Engineer	123	9
Sales Representative	50	33
Engineering Manager	73	
Analytics Manager	49	
Manager	35	
HR Executive	25	
Recruiter	15	9
HR Business Partner	7	
HR Manager		

Total Emp

Attrition Rate by Department

Department	Attrition Rate
Sales	20.63%
Human Resources	19.05%
Technology	13.84%

Attrition no. by Year of Departure and Department

Department ● Human Resources ● Sales ● Technology

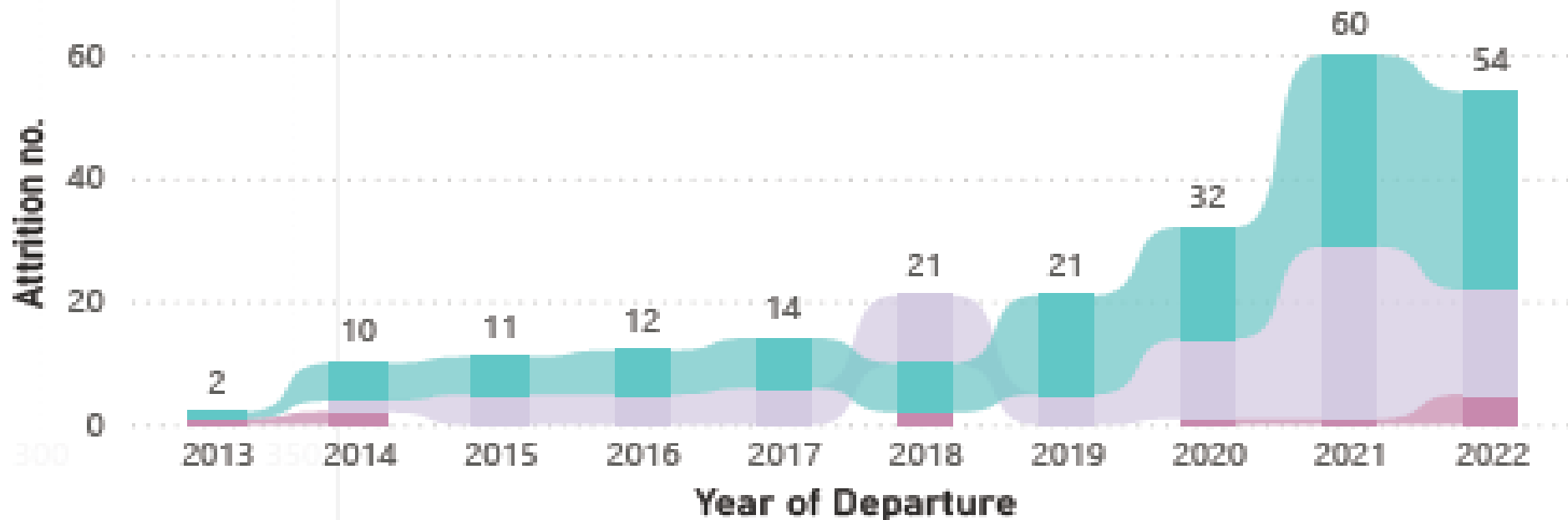Values by Year of Departure: 2013: 2, 2014: 10, 2015: 11, 2016: 12, 2017: 14, 2018: 21, 2019: 21, 2020: 32, 2021: 60, 2022: 54
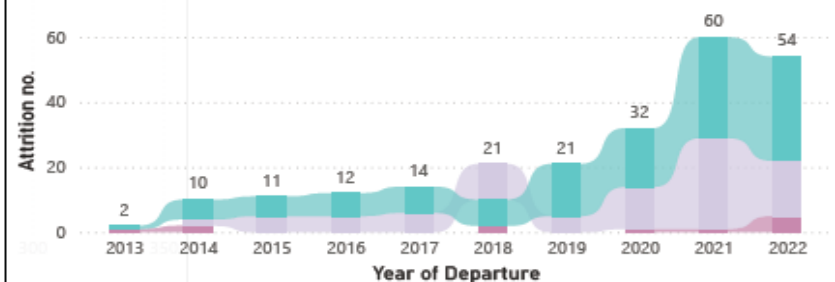
Attrition Trends Over Years

Attrition no. by Year of Departure and Department

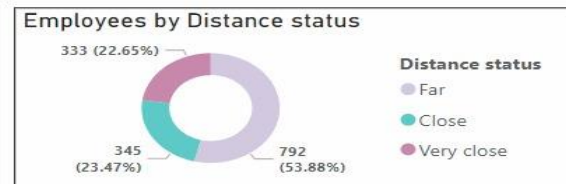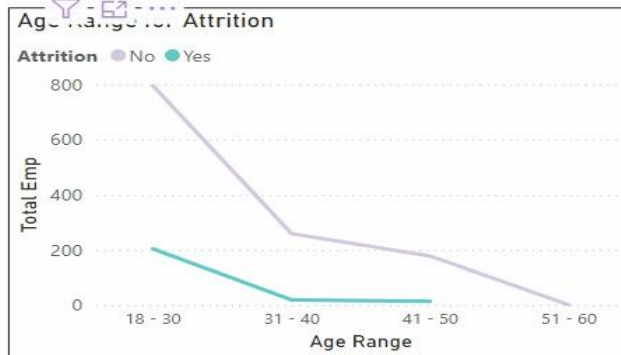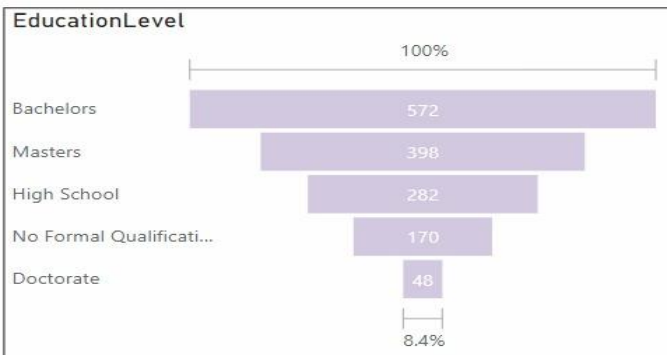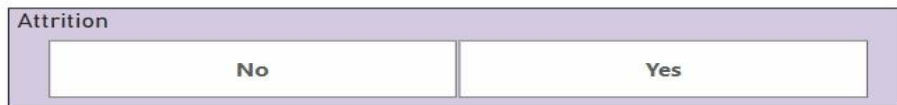Department ● Human Resources ● Sales ● Technology

Attrition no.

- 2013: 2
- 2014: 10
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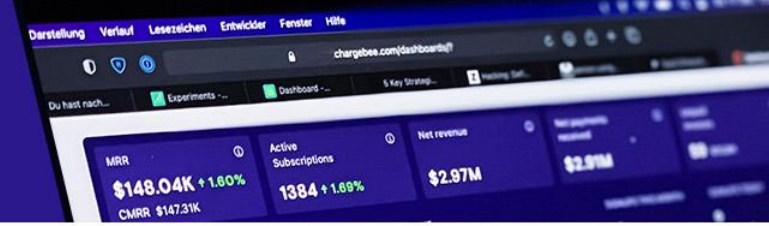- 2020: 32
- 2021: 60
- 2022: 54

Year of Departure

Factors Affect Attrition
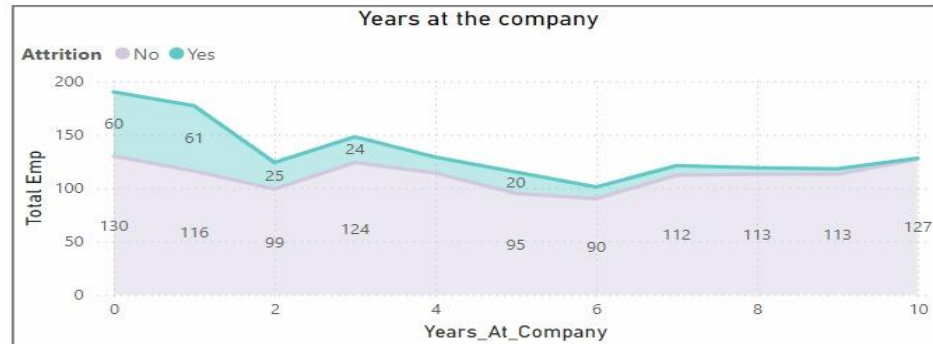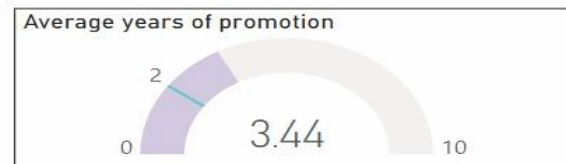
Employees Performance

Performance Level among years:

- The satisfaction level and the rating level within the company **is quite high (above 3.4/5) and convergent (in average) and (among the employment)**.

- This reflect **middle to high satisfaction level** and **middle to high rating level.**

- **The environment satisfaction and the self rating scored the highest level** (3.9 and 4 on average respectively)

- **Performance Level among years:**

 No significant change in the satisfaction level and the rating level **among the years** in the 6 measurements.

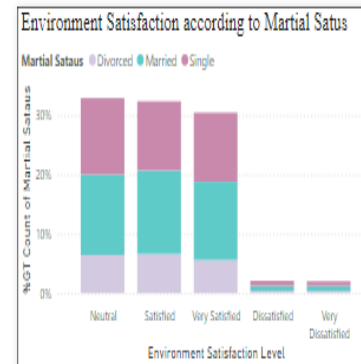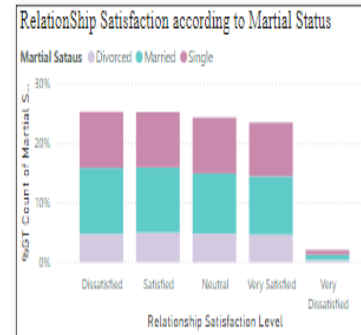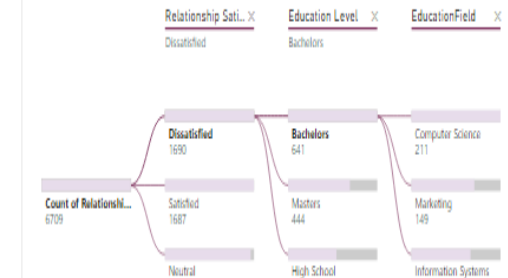| Average of Relationship Satisfaction	Average of Worklife Balance	Average of Jop Satisfaction	Average of Environment Satisfaction	Average of Self Rating	Average of Manage Rating
68.55% ★★★★★ 3.43/5	68.29% ★★★★★ 3.41/5	68.61% ★★★★★ 3.43/5	77.45% ★★★★★ 3.87/5	79.68% ★★★★★ 3.98/5	69.47% ★★★★★ 3.47/5

On personal profile level:

*Dissatisfactions level among the different variable*

- [ ] Males and female shows the differ in their degree of satisfaction
- [ ] Age group between 25-28 had the highest dissatisfaction level also.
- [ ] "White and the mixed ethics" had the dissatisfaction level and thus the lowest self-rating.
- [ ] "Bachelor's degree Holders" in the three education fields express high degree of dissatisfaction

- [ ] The marital status didn't affect the dissatisfaction r the rating level **(significantly).**

RelationShip Satisfaction according to Martial Status

Martial Sataus ● Divorced ● Married ● Single

Environment Satisfaction according to Martial Satus

Martial Sataus ● Divorced ● Married ● Single

RelationShip Satisfaction according to Education Level and Feild

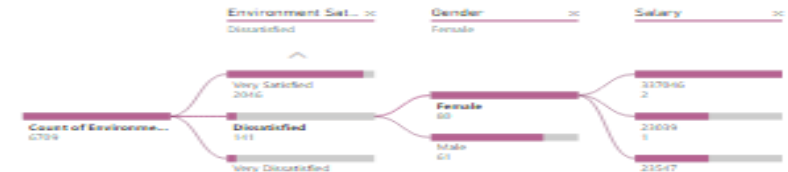Environment Satisfaction according to Education Level and Feild
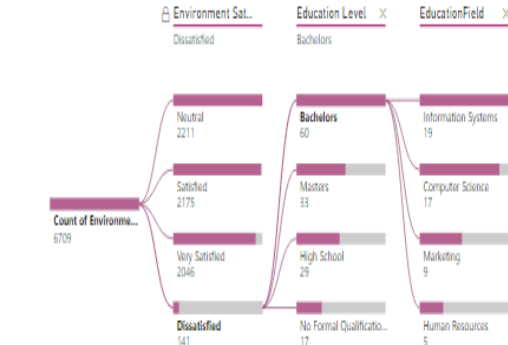
On job profile level:

❑ People with lower salary (earned below 115 K) show high level of dissatisfaction.

- **On working departments**: sales and IT department had the highest degree of dissatisfaction. **Thus, sales executives, data scientist and software engineer response prove that.**

❑ **No any correlation** found between the low rating level or low satisfaction level and **(years with the same manager, years in the recent role, years at the company and training opportunities)**.

❑ **A positive correlation** found between the level of satisfaction and the high rating level, and the **average of promotion provided to the employee (except for job satisfaction and relationship satisfaction)**

Conclusion

KPI

HR Project Recommendations

Average of DistanceFromHome (KM)	Average of Training Taken	Average years of promotion
22.50	1.02	3.44

Conclusion

TRAINING

PROMOTION

SALARY

DISTANCE
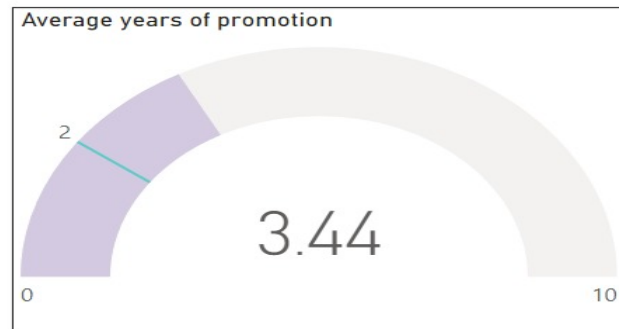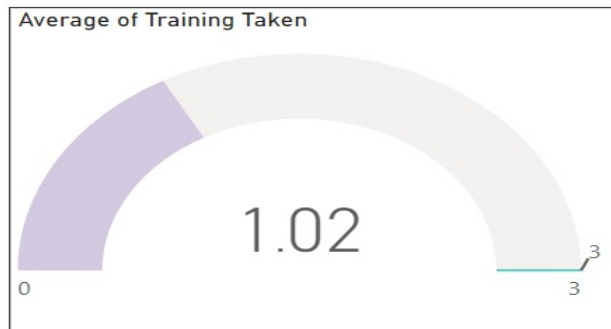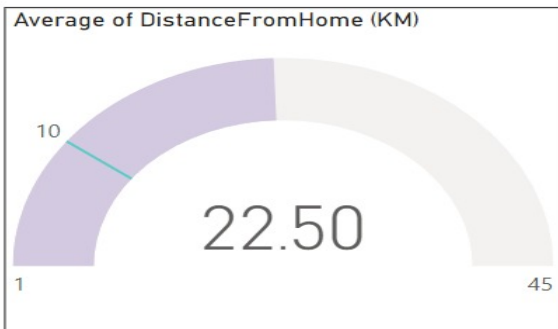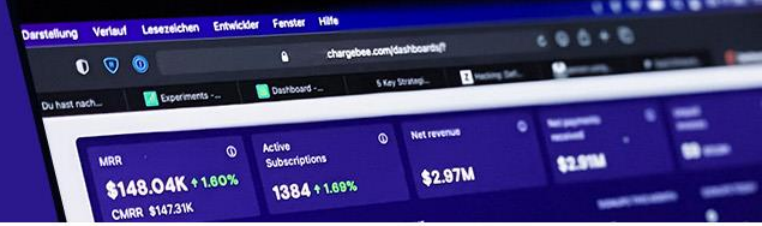
Recommendations
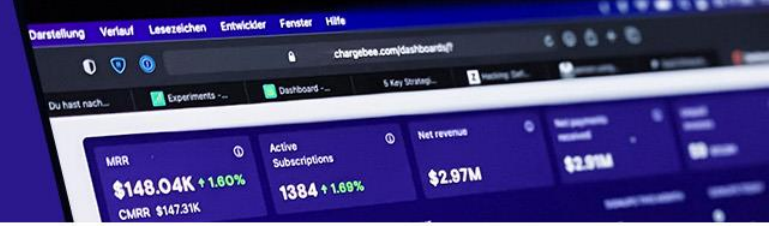
❑ Working on minimizing the gap between " years of promotion" to be 2 years on average instead of 4.5 years

❑ Increase incentives and promotion especially the group provided to the employees in the age (25-30) years

❑ Apply new composition of incentives and promotion rather than the financial incentives is recommended

❑ Set a group of programs to enhance the working environment and the skills of the data scientist and sales executives.

❑ Enhance and increase the training opportunities given to the employment to increase their effect on the performance level.

❑ Enabling remote work

❑ Flexible working hours

❑ Providing transportation for employees

THANK YOU