HR Analysis

Our Team

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Why we do HR analysis ?

HR analysis is used to understand employees better, make informed decisions, and improve how an organization operates. It helps companies hire the right people, reduce turnover, enhance performance, save costs, improve engagement, predict future workforce needs, and ensure fair and objective decision-making.
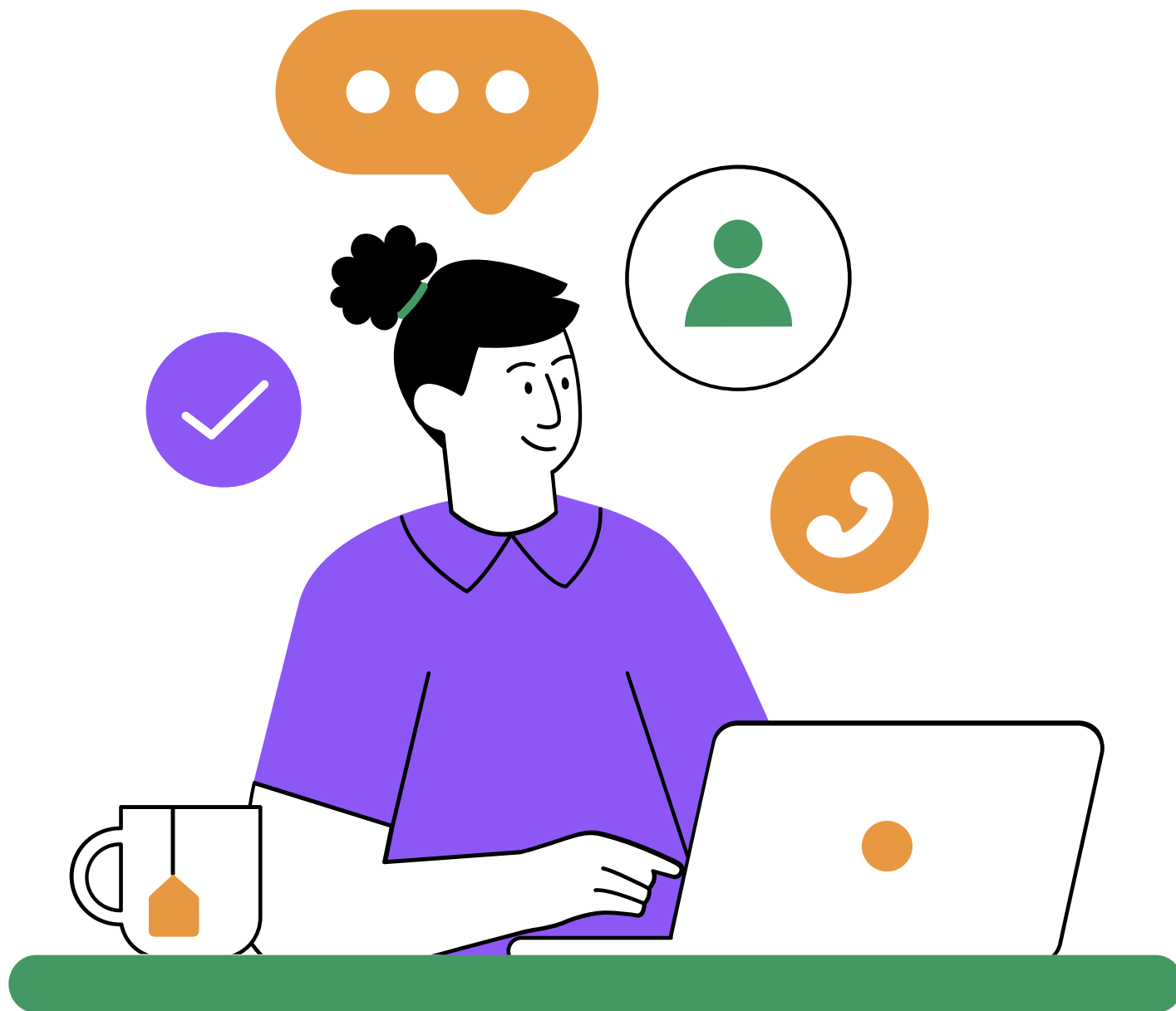
Key Points

- Better hiring
- Reduce turnover
- Improve performance
- Lower costs
- Increase engagement
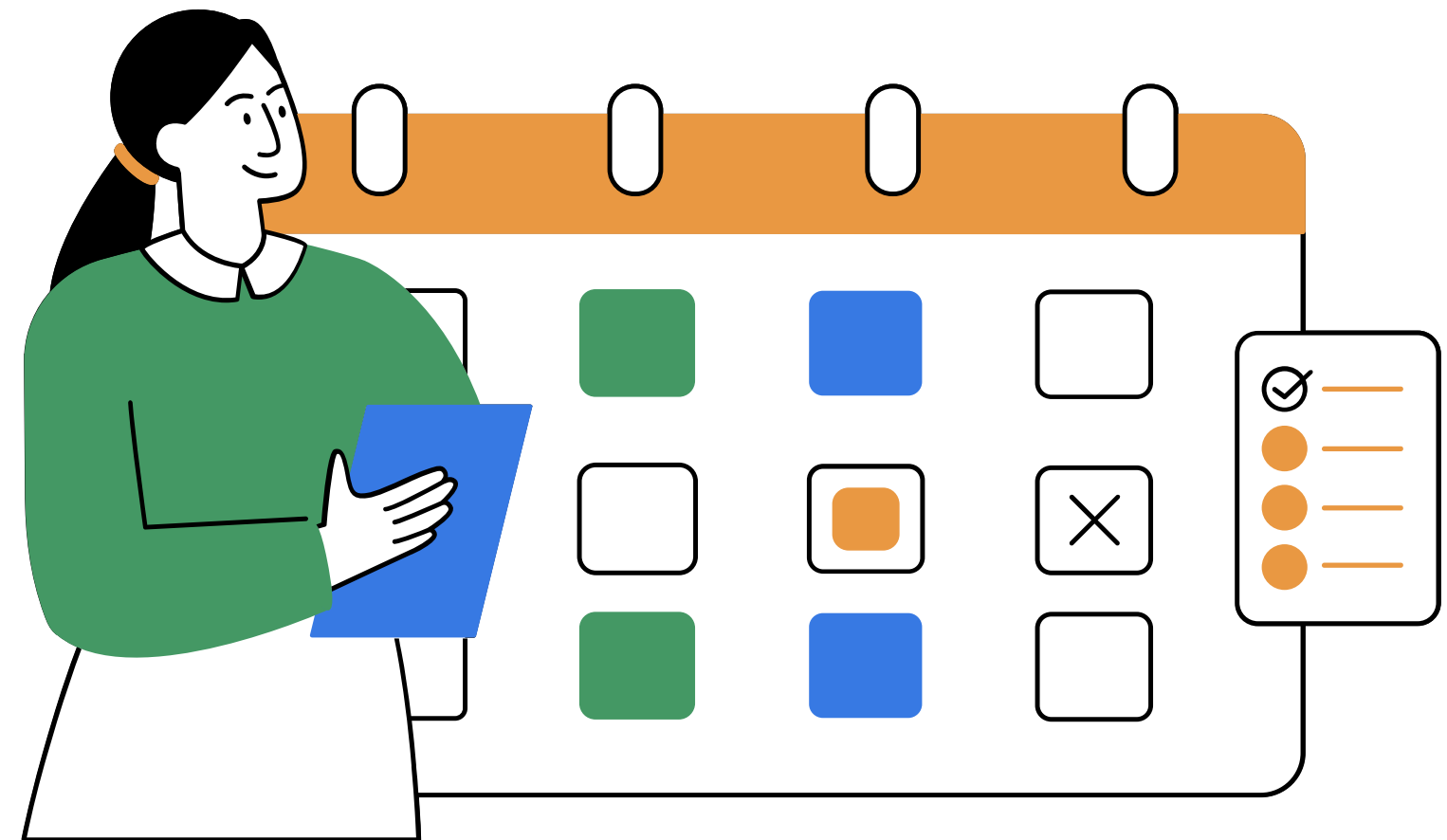- Predict future needs
- Fair decisions
- Stronger workplace
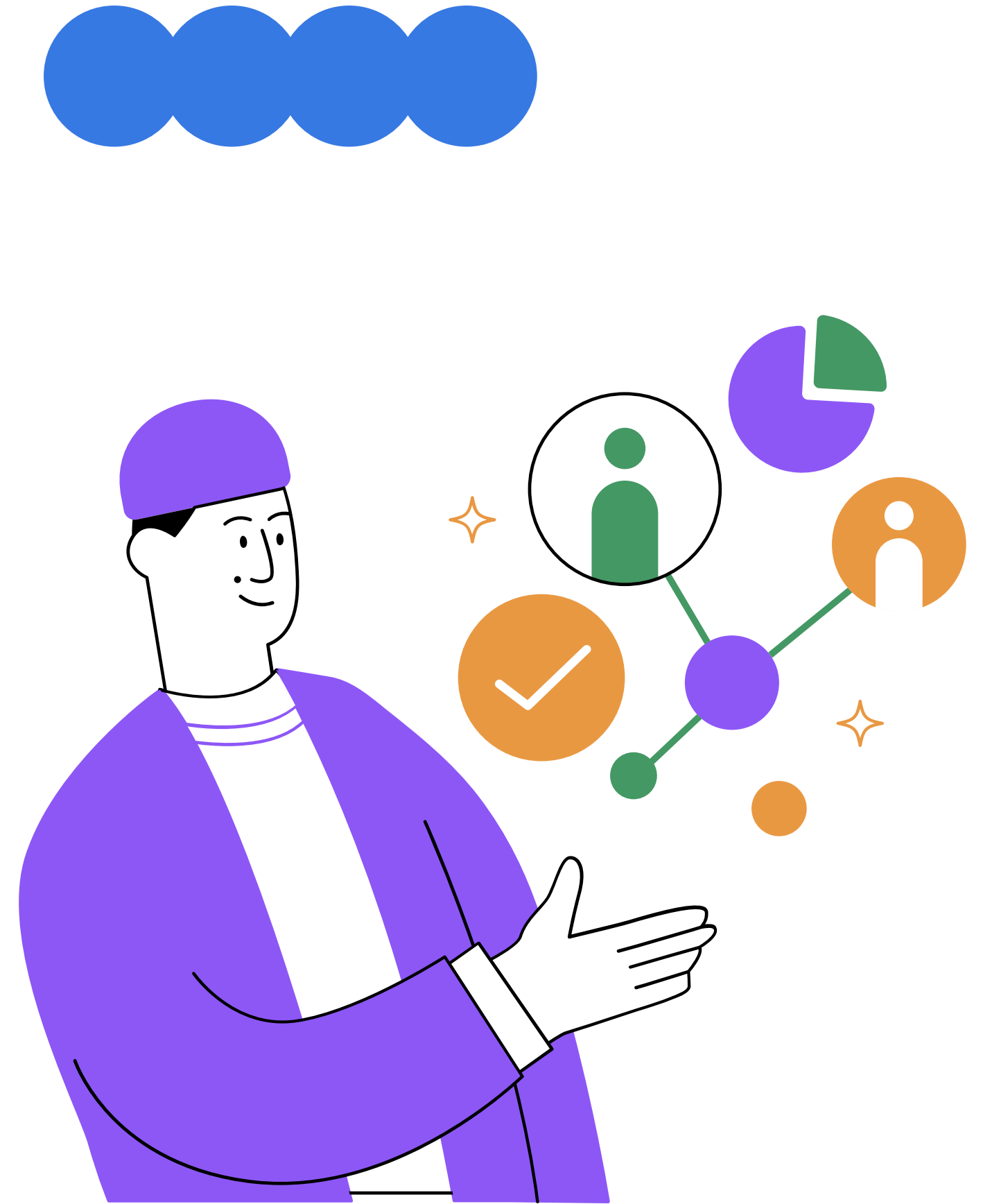
Work Flow

- Data Cleaning and processing
- Dax & Measures
- Dash Board

Data Cleaning Process

1. Remove Unnecessary Columns

Delete any fields that do not add value, such as:

- Employee number (if irrelevant)
- IDs repeated in multiple tables
- Empty or blank columns
- Notes or comments fields

2. Check for Missing Values

Look for blank or null data in:

- Salary
- Department
- Age
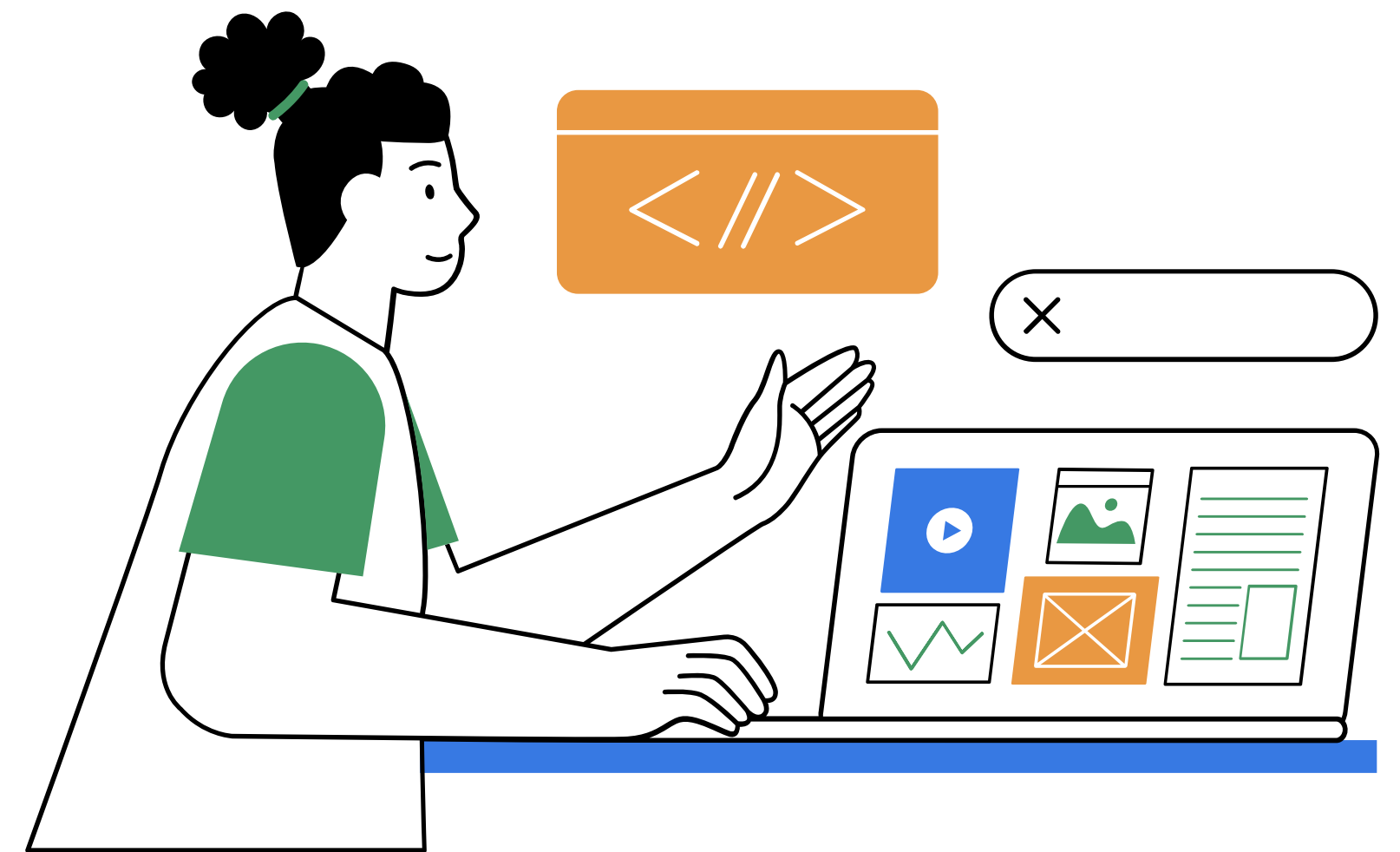- Attrition
- Job role
- Hire date

3. Convert Data Types

Ensure all data types are correct:

- Dates → Date format
- Salary → Number
- Attrition → Text
- Age → Number

Dax & Measures

```
1 Attrition Rate = DIVIDE(CALCULATE(COUNTROWS(Employee),Employee[Attrition] = "Yes" ), CALCULATE(COUNTROWS(Employee)))
```

```
Attrition Rate by Month =
CALCULATE(
    TOTALMTD([Attrition Rate], 'Calendar'[Date]),
    USERELATIONSHIP('Calendar'[Date], Employee[HireDate])
)
Attrition Rate by Year =
CALCULATE(
    TOTALYTD([Attrition Rate], 'Calendar'[Date]),
    USERELATIONSHIP('Calendar'[Date], Employee[HireDate])
)

Attrition Rate by HireDate =
CALCULATE(
    [Attrition Rate],
    USERELATIONSHIP('Calendar'[Date], Employee[HireDate])
)
```
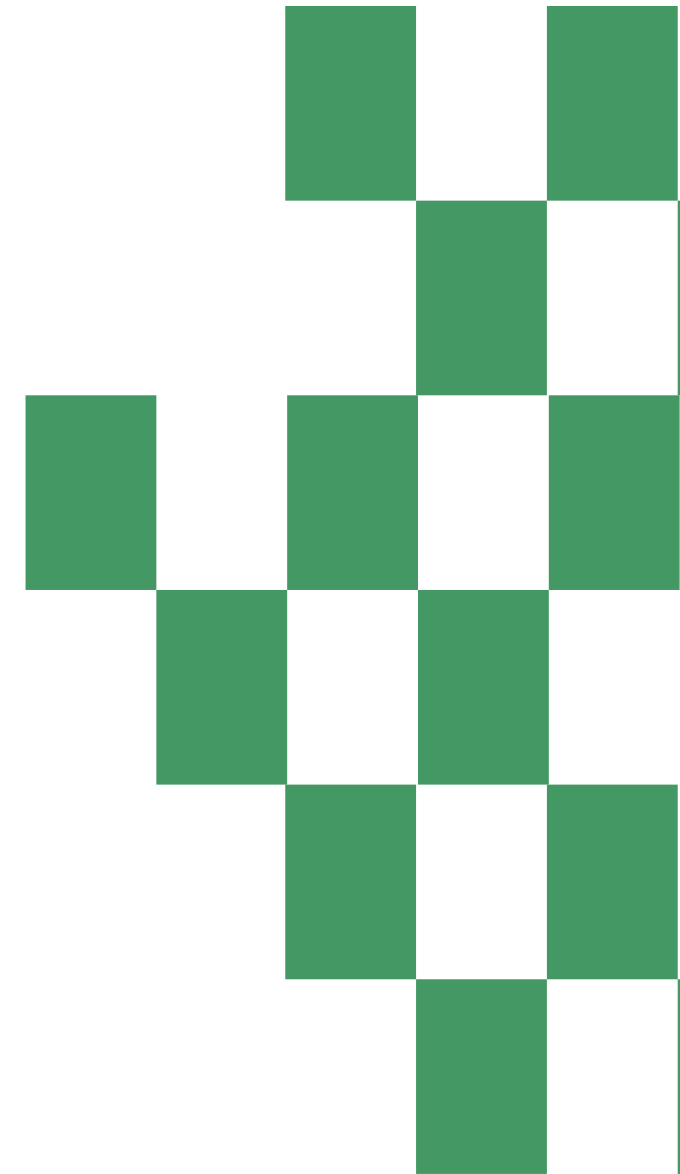
```
Avg ManagerRating = AVERAGE(PerformanceRating[ManagerRating])

Avg SelfRating = AVERAGE(PerformanceRating[SelfRating])

Avg Salary =
CALCULATE(
    AVERAGE(Employee[Salary]),
    USERELATIONSHIP('Calendar'[Date], Employee[HireDate])

Avg Age =
CALCULATE(
    AVERAGE(Employee[Age]),
    USERELATIONSHIP('Calendar'[Date], Employee[HireDate])
)
```

```
Leavers = //عدد المغادرين
CALCULATE(
    DISTINCTCOUNT(Employee[EmployeeID]),
    Employee[Attrition] = "Yes",
    USERELATIONSHIP('Calendar'[Date], Employee[HireDate])
)


Exceeds Expectation % =
DIVIDE(
    CALCULATE(
        COUNTROWS(PerformanceRating),
        PerformanceRating[ManagerRatingLevel] = "Exceeds Expectation"
    ),
    COUNTROWS(PerformanceRating)
)
```

```
1  T.Employees = CALCULATE(DISTINCTCOUNT(Employee[EmployeeID]),USERELATIONSHIP('Calendar'[Date],Employee[HireDate]))
```

```
1  T.Reviews = COUNTROWS(PerformanceRating)
```

```
1  Reviews YTD = TOTALYTD([T.Reviews],'Calendar'[Date])
```

```
1  Reviews MTD = TOTALMTD([T.Reviews],'Calendar'[Date])
```

```
T.Training Oppertunaties =
SUM(PerformanceRating[TrainingOpportunitiesWithinYear])
```

```
Training Participation % =
DIVIDE(
    [T.Trainings Taken],
    [T.Training Oppertunaties],
    0
)
```

```
1  The Number of Enviroment Satisfacation = COUNT(PerformanceRating[EnvironmentSatisfactionLevel])


Overall Satisfaction =
AVERAGEX(
    PerformanceRating,
    (PerformanceRating[JobSatisfaction] +
     PerformanceRating[EnvironmentSatisfaction] +
     PerformanceRating[RelationshipSatisfaction]) / 3
)
```
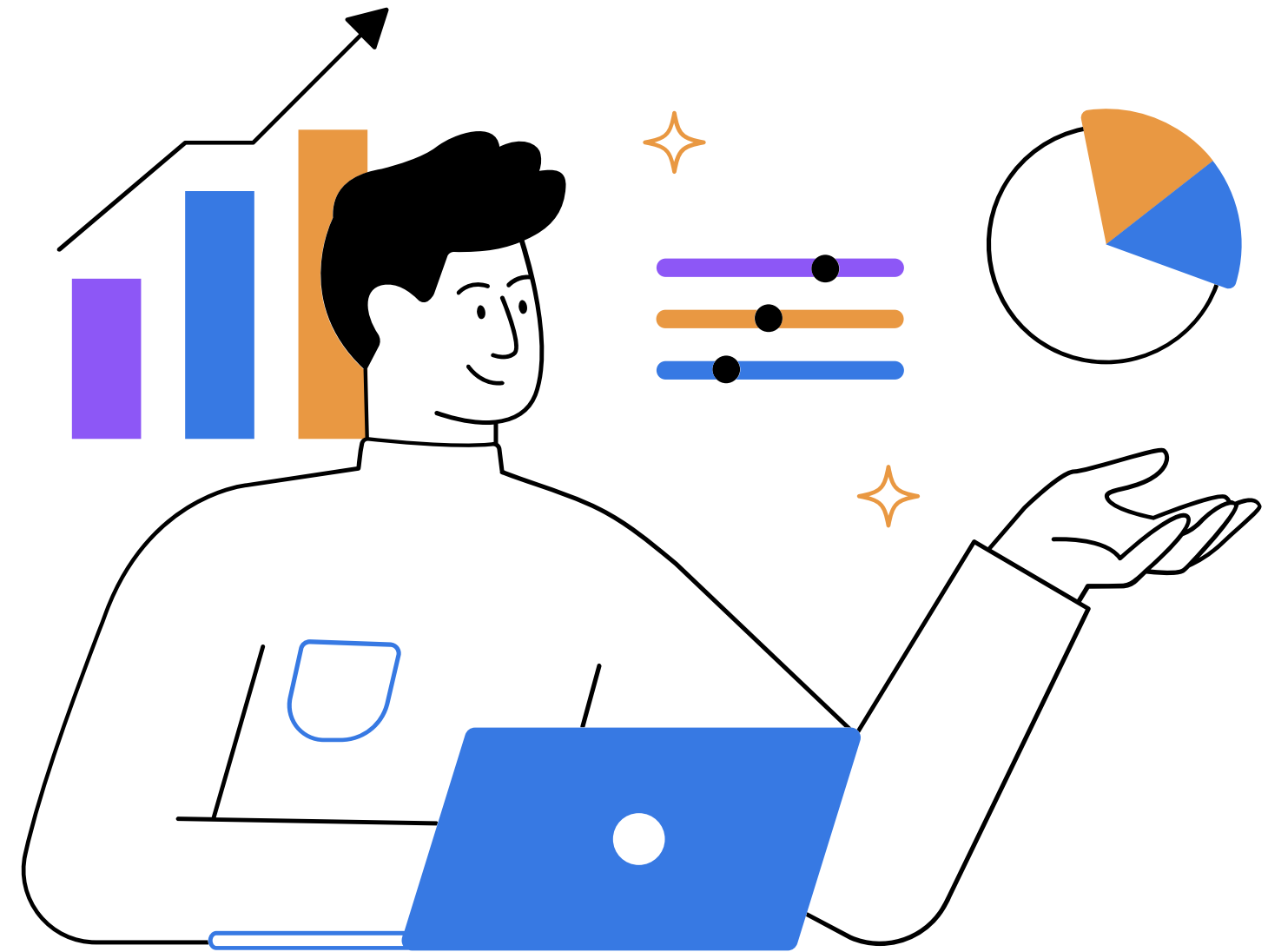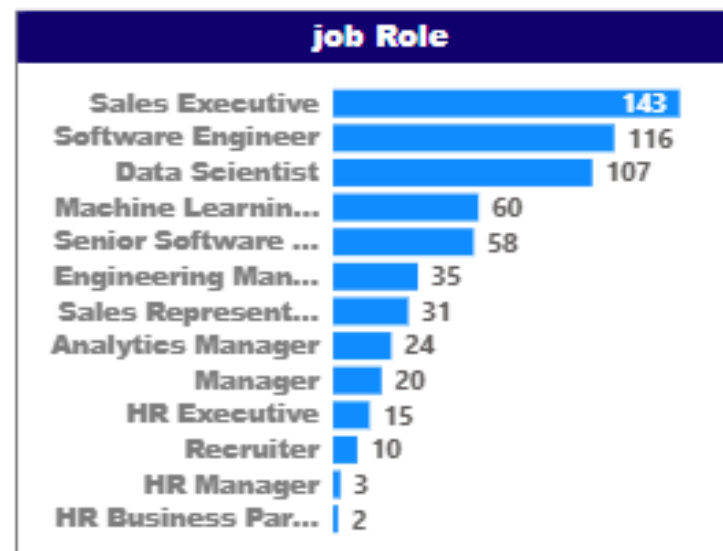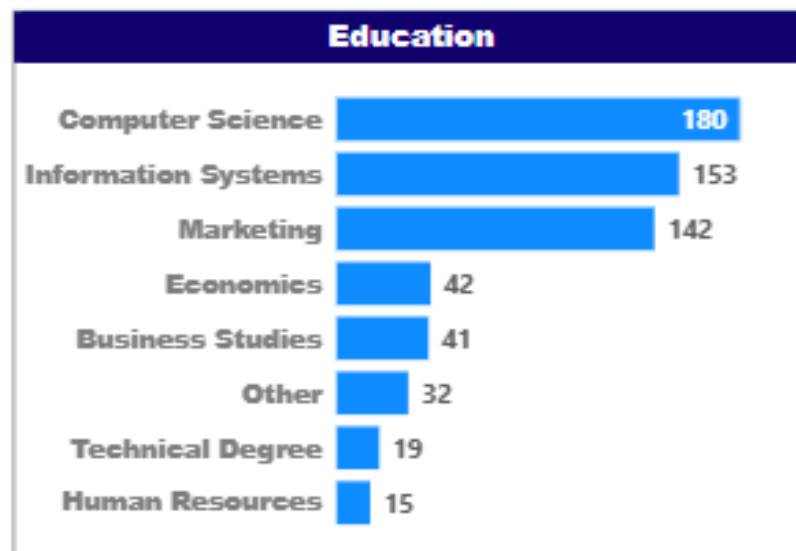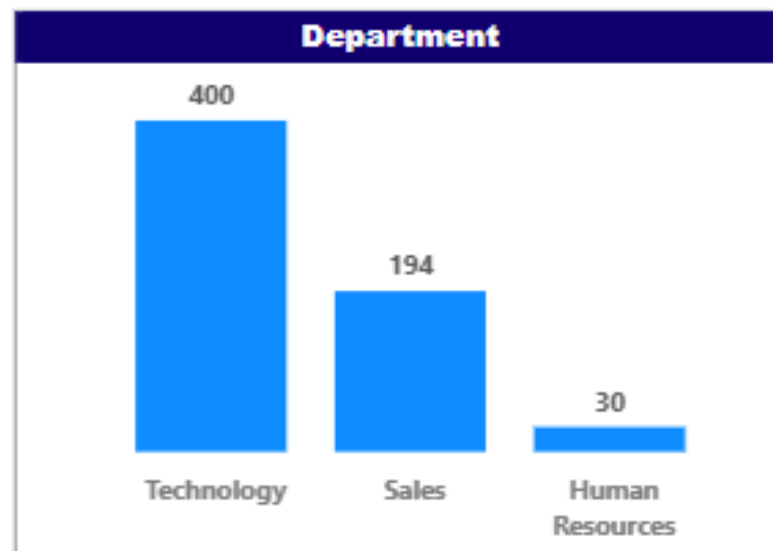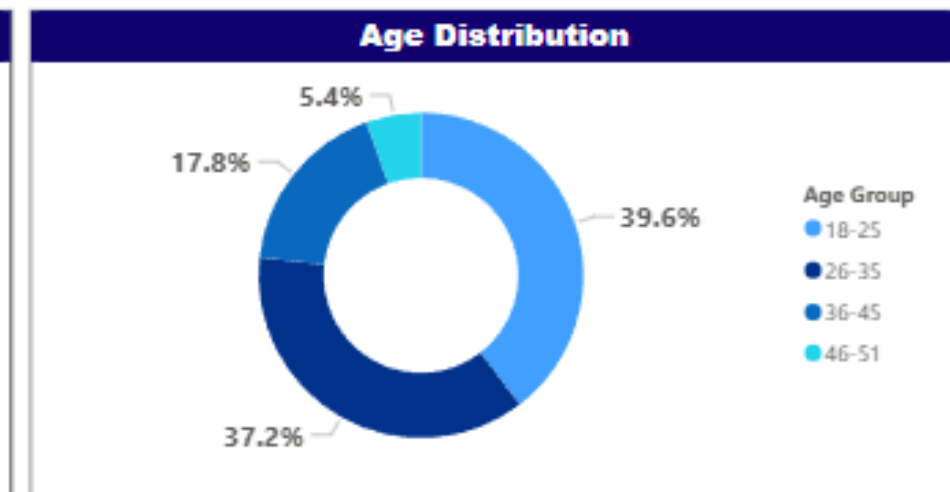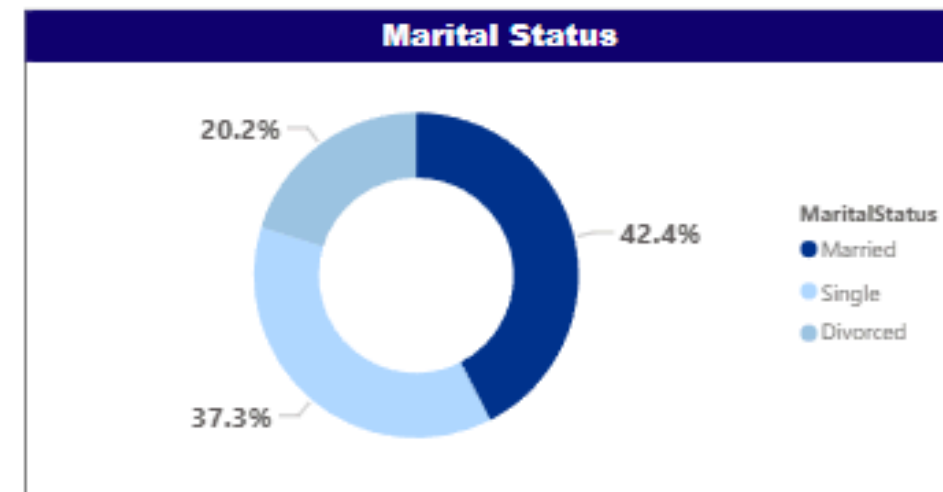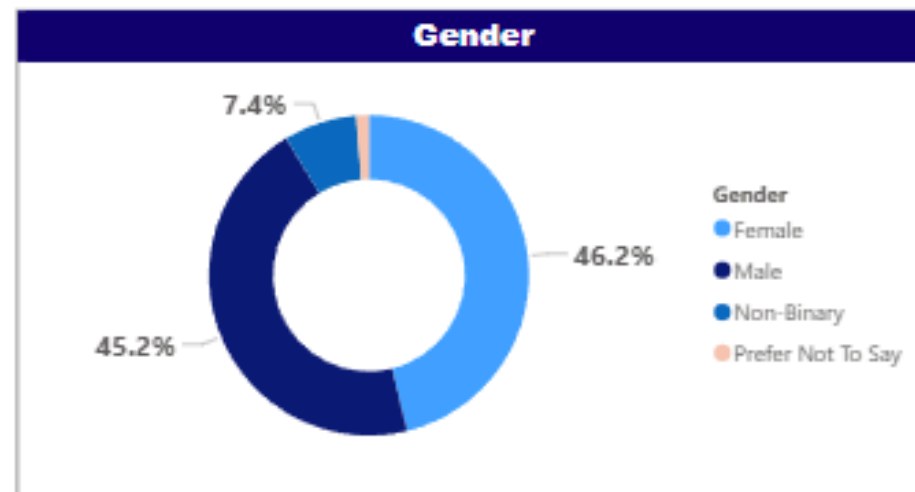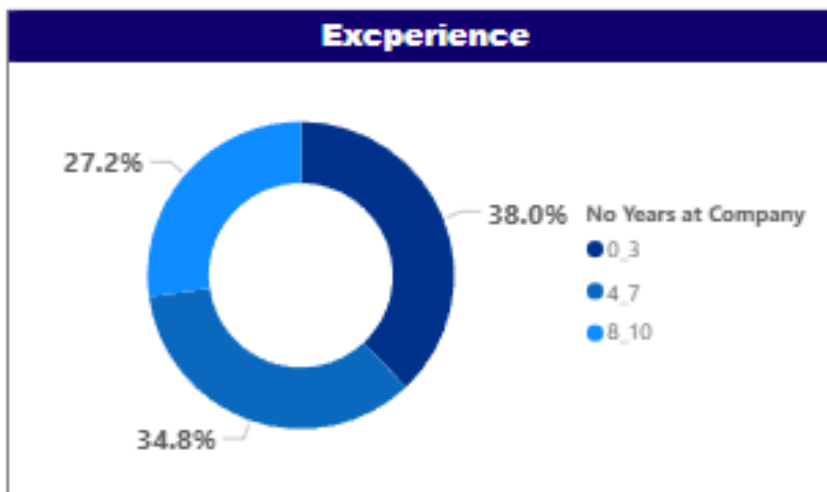
Dash
Board

HR Overview

Department	Relationship Satsification	Job Satsification	Environnment Satsification	Manager Rating	Gender	Year
All	All	All	All	All	All	All

T.Employees 624

Avg Age 30

Avg Salary 117K

Avg Experience 5

Attrition Rate 12.66%

Department
- Technology: 400
- Sales: 194
- Human Resources: 30

Education
- Computer Science: 180
- Information Systems: 153
- Marketing: 142
- Economics: 42
- Business Studies: 41
- Other: 32
- Technical Degree: 19
- Human Resources: 15

job Role
- Sales Executive: 143
- Software Engineer: 116
- Data Scientist: 107
- Machine Learnin...: 60
- Senior Software ...: 58
- Engineering Man...: 35
- Sales Represent...: 31
- Analytics Manager: 24
- Manager: 20
- HR Executive: 15
- Recruiter: 10
- HR Manager: 3
- HR Business Par...: 2

Company's Employee

Full Name		Age	Department	EducationField	RelationshipS
Abra MacGray	ale	20	Technology	Information Systems	Dissatisfied
Adan Fradgley	le	29	Sales	Marketing	Dissatisfied
Adan Sunderland	ale	31	Technology	Computer Science	Dissatisfied
Adara Sleeford	ale	22	Sales	Marketing	Satisfied
Addison Elfe	le	46	Technology	Information Systems	Dissatisfied
Addison McCormack	le	28	Sales	Marketing	Very Satisfied
Addy Slimings	ale	38	Technology	Other	Dissatisfied
Adelheid Battersby	ale	27	Sales	Economics	Dissatisfied
Adria Smurfit	ale	25	Sales	Technical Degree	Neutral

Excperience
- 38.0%
- 27.2%
- 34.8%

No Years at Company
- 0_3
- 4_7
- 8_10

Gender
- 7.4%
- 46.2%
- 45.2%

Gender
- Female
- Male
- Non-Binary
- Prefer Not To Say

Marital Status
- 20.2%
- 42.4%
- 37.3%

MaritalStatus
- Married
- Single
- Divorced

Age Distribution
- 5.4%
- 17.8%
- 39.6%
- 37.2%

Age Group
- 18-25
- 26-35
- 36-45
- 46-51

Department	Relationship Satsification	Job Satsification	Environnment Satsification
All ⌄	All ⌄	All ⌄	All ⌄

Manager Rating	Gender	Year
All ⌄	All ⌄	All ⌄

- **Explore data instantly - Ask "what if" questions by clicking**
- **Find hidden patterns - Discover that high attrition is really in just Sales department**
- **Compare groups - See how females vs. males differ in pay or satisfaction**
- **Empower users - Let managers answer their own questions without asking you**
- **Connect everything - One slicer filters ALL your charts at once**

T.Employees	Avg Age	Avg Salary	Avg Experience	Attrition Rate
1.470	29	113K	5	16.12%

1. Workforce Profiling and Demographic Analysis:

- The dashboard fundamentally answers the question, "Who makes up our company?" It provides a clear demographic and professional snapshot of the employee base.

- Total Employees : This is the most basic yet critical metric, offering a real-time headcount. It is essential for budgeting, resource allocation, and understanding the scale of the organization.

- Average Age : This metric helps in understanding the generational composition of the workforce

- Average Experience : This reveals the overall level of expertise and tenure within the company

T.Employees	Avg Age	Avg Salary	Avg Experience	Attrition Rate
1.470	29	113K	5	16.12%

2. Financial and Compensation Benchmarking:

- Ensure that the company's compensation bands are competitive within the industry to attract and retain top talent.

- Manage payroll budgets effectively and forecast future financial requirements.

- Analyze salary equity across different departments, roles, and demographics to identify and address potential disparities.

T.Employees	Avg Age	Avg Salary	Avg Experience	Attrition Rate
1.470	29	113K	5	16.12%

3. Cross-Functional Organizational Insight:

- Comparing the attrition rate in the high-pressure Sales department against the Technology department to see if issues are company-wide or localized.

- Analyzing if the average salary in Technology is competitive enough to prevent poaching by rivals.

- Understanding if one department has a significantly younger or less experienced profile than another, requiring tailored management approaches.

Experience Distributions :

The breakdown of experience levels reveals the organization's maturity and knowledge depth. A high concentration in the "69.2%" bracket, likely representing mid-level experience, suggests a robust core of competent practitioners. However, it also flags a potential risk if this large cohort hits a promotion ceiling simultaneously or if there is a lack of senior leaders (low percentage in high-experience tier) to guide them.

Age Distribution :

The age ranges provide context for the "Average Age" seen in other dashboards. A distribution skewed towards younger ages would explain a lower average and necessitates a focus on early-career development, student loan benefits, and a dynamic culture. A more balanced or older distribution would demand robust health plans, retirement planning, and succession strategies.
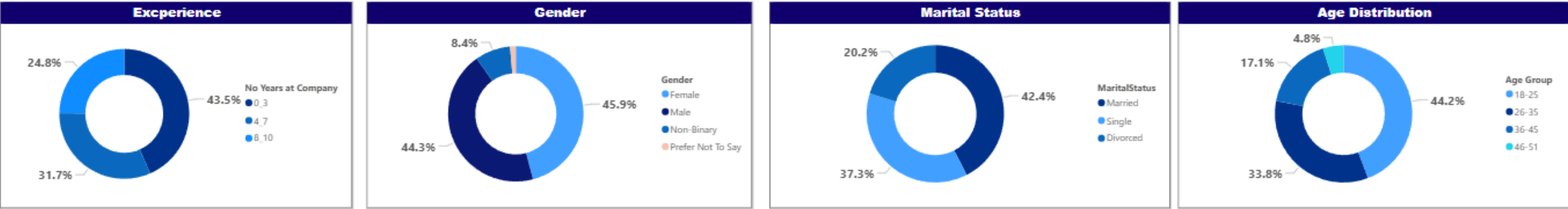
Gender Diversity :

This visualization is essential for tracking representation. It allows the company to monitor progress towards gender balance goals. A significant disparity, as hinted at by the 52% vs. 20% split, immediately signals an area requiring focus. More importantly, this data must be cross-referenced with other metrics.
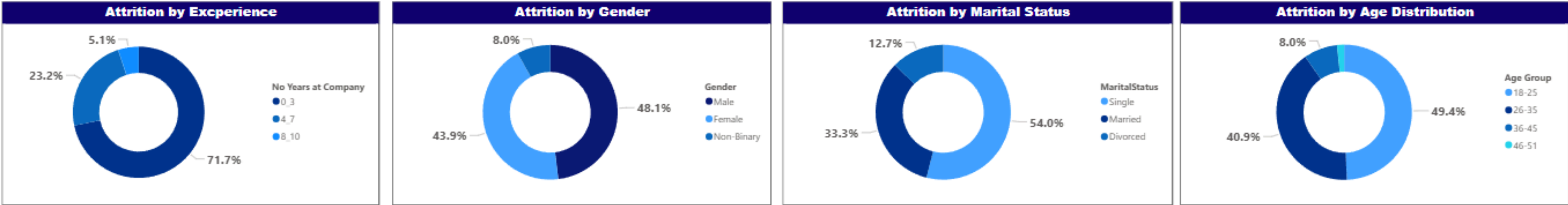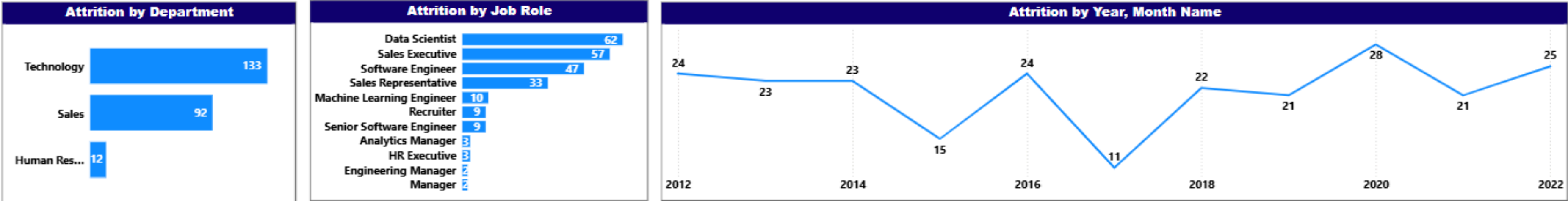
Marital Status :

Understanding the marital (and often, by extension, dependent) status of the workforce is crucial for designing competitive benefits packages. A workforce with a high percentage of married employees with children will value robust family health insurance, parental leave policies, and dependent care flexible spending accounts far more than a single, younger workforce.
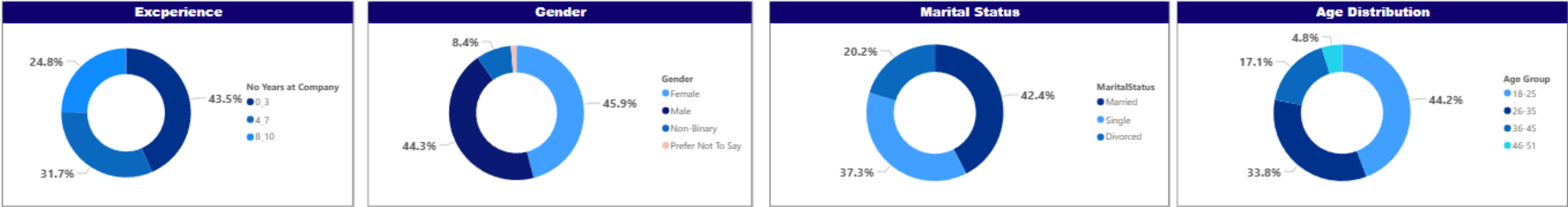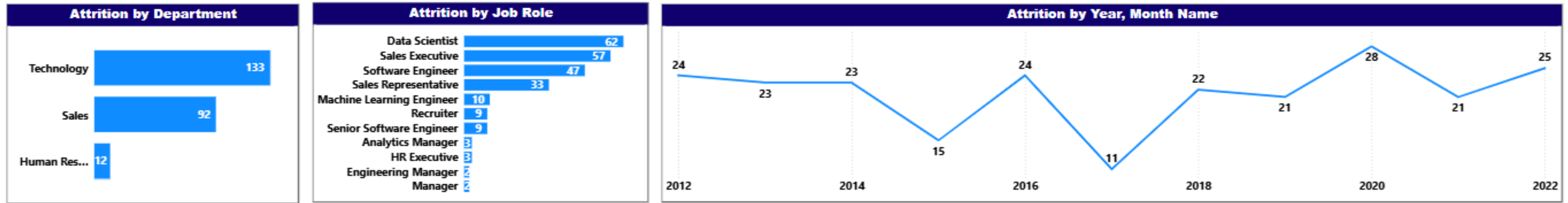
Attrition Deep Dive

T.Employees	Avg Age	Avg Salary	Avg Experience	Attrition Rate
1,470	29	113K	5	16.12%

Attrition by Department

- Technology: 133
- Sales: 92
- Human Res...: 12

Attrition by Job Role

- Data Scientist: 62
- Sales Executive: 57
- Software Engineer: 47
- Sales Representative: 33
- Machine Learning Engineer: 10
- Recruiter: 9
- Senior Software Engineer: 9
- Analytics Manager: 3
- HR Executive: 3
- Engineering Manager: 2
- Manager: 2

Attrition by Year, Month Name

2012: 24, 23: 23, 15, 2016: 24, 11, 22, 2018: 21, 2020: 28, 21, 2022: 25

Attrition by Excperience

- 5.1%
- 23.2%
- 71.7%

No Years at Company
- 0_3
- 4_7
- 8_10

Attrition by Gender

- 8.0%
- 48.1%
- 43.9%

Gender
- Male
- Female
- Non-Binary

Attrition by Marital Status

- 12.7%
- 54.0%
- 33.3%

MaritalStatus
- Single
- Married
- Divorced

Attrition by Age Distribution

- 8.0%
- 49.4%
- 40.9%

Age Group
- 18-25
- 26-35
- 36-45
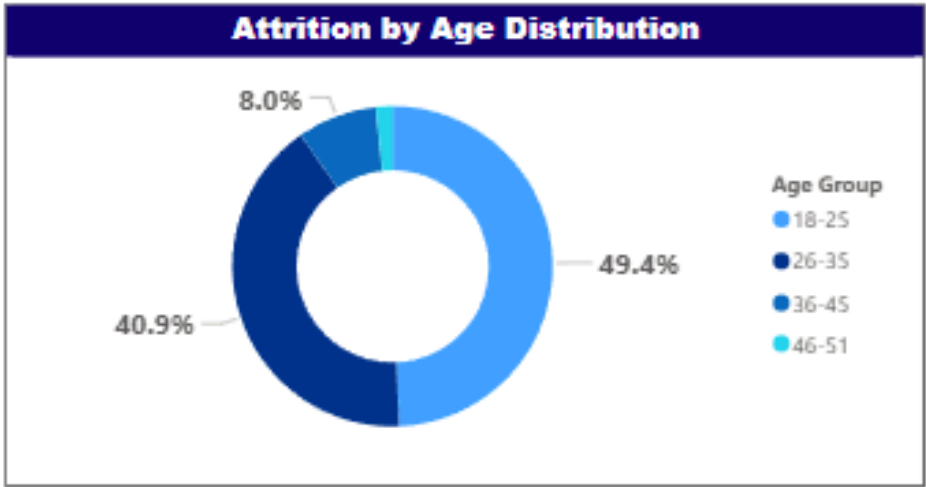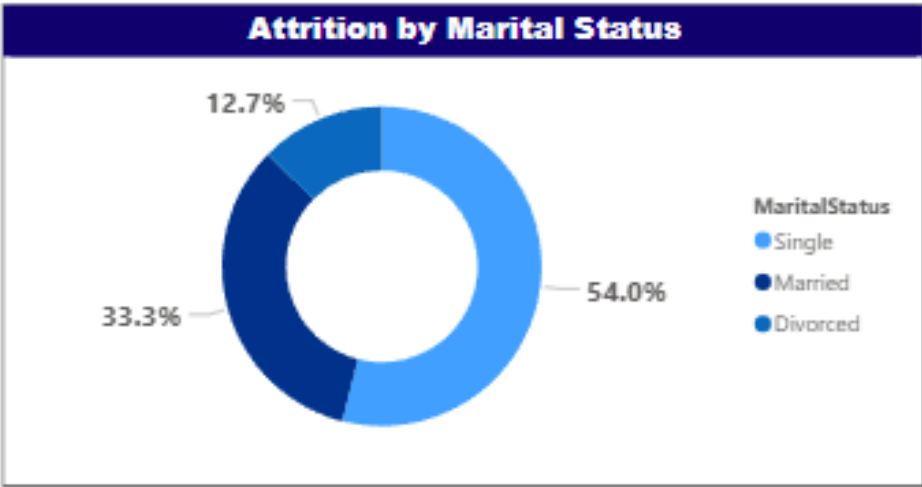- 46-51

Attrition and Retention Management:

- Identifying a Problem: A 19.05% attrition rate is generally considered high for most industries. This immediately signals a potential retention crisis that requires urgent investigation.

- Quantifying Impact: By linking the attrition count (12) to the total headcount (63), the dashboard makes the problem tangible. It answers, "How many people are we actually losing?"

- Triggering Root Cause Analysis: This high rate would prompt deep-dive questions: Is this attrition concentrated in a specific department (e.g., Sales or Technology, as listed in the header)?

Attrition by Experience : This is the most critical dimension. A very high attrition rate (e.g., 49.8%) among employees with low tenure (e.g., 0-2 years) signals a failure in the recruitment, onboarding, or initial job fit process. compensation for tenured staff.

Attrition by Gender : This disparity demands an immediate and deep investigation into potential issues like pay equity, promotion rates, prevalence of microaggressions, or inadequate support for working parents within that gender group.

Attrition by Age Distribution : This reveals generational turnover trends. A very high rate (54.0%) among younger employees (e.g., under 30) could indicate a mismatch with company culture, a desire for faster career progression, or better opportunities elsewhere

Attrition by Marital Status : Analyzing turnover by marital status can uncover challenges related to work-life balance. For example, a high attrition rate among single employees might suggest a culture of excessive overtime that is unsustainable for those without domestic support

Attrition by Excperience

5.1%
23.2%
71.7%

No Years at Company
● 0_3
● 4_7
● 8_10

Attrition by Gender

8.0%
48.1%
43.9%

Gender
● Male
● Female
● Non-Binary

Attrition by Marital Status

12.7%
54.0%
33.3%

MaritalStatus
● Single
● Married
● Divorced

Attrition by Age Distribution

8.0%
49.4%
40.9%

Age Group
● 18-25
● 26-35
● 36-45
● 46-51
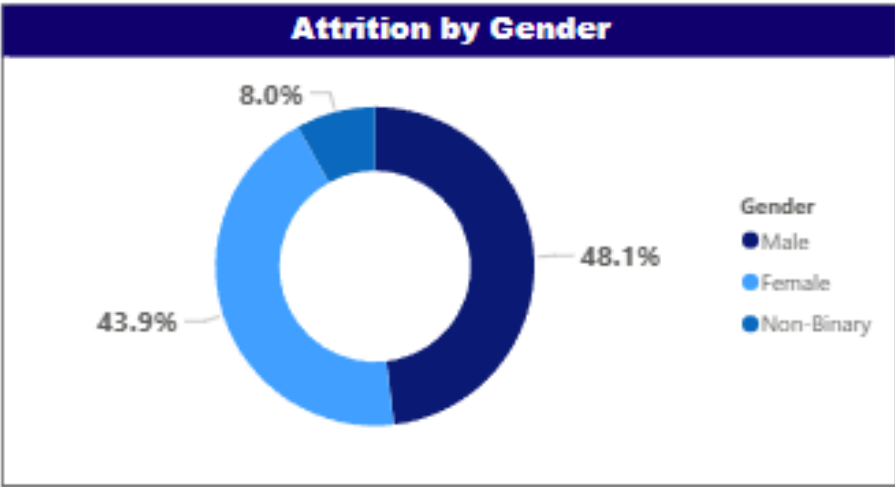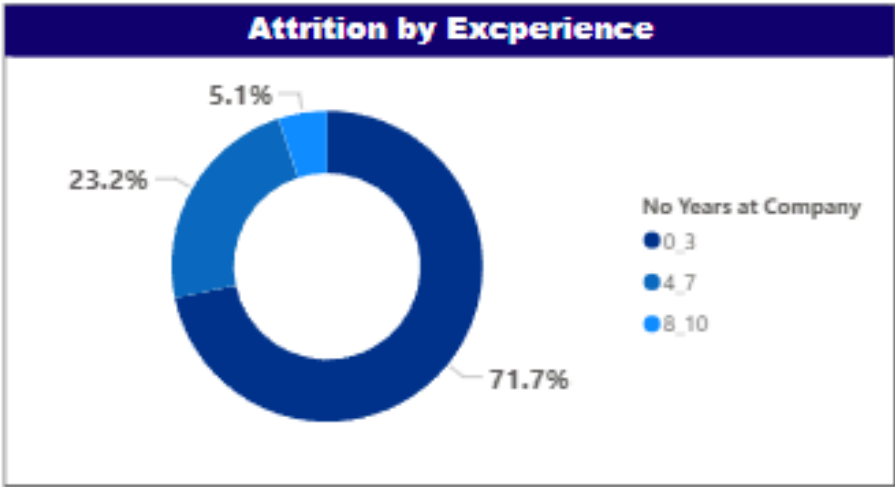
Level of Satisfaction

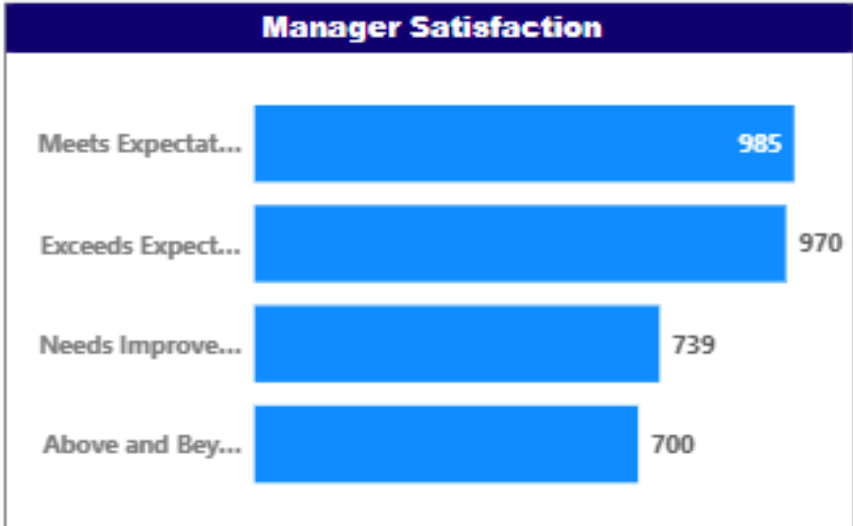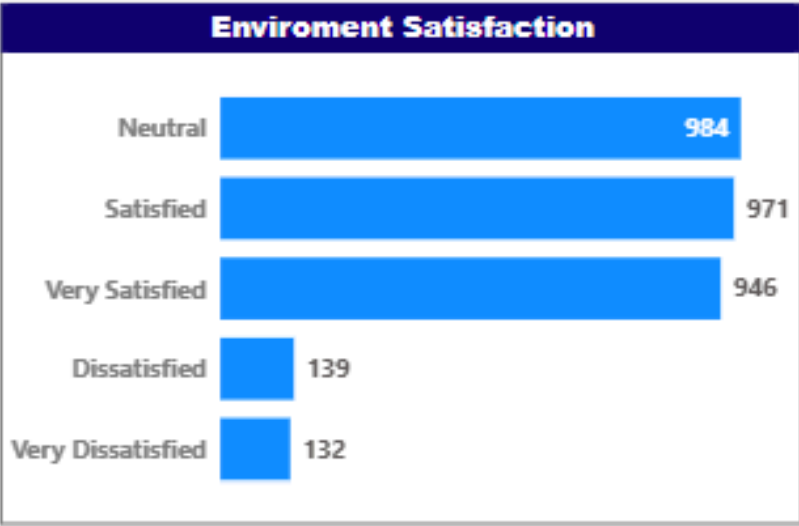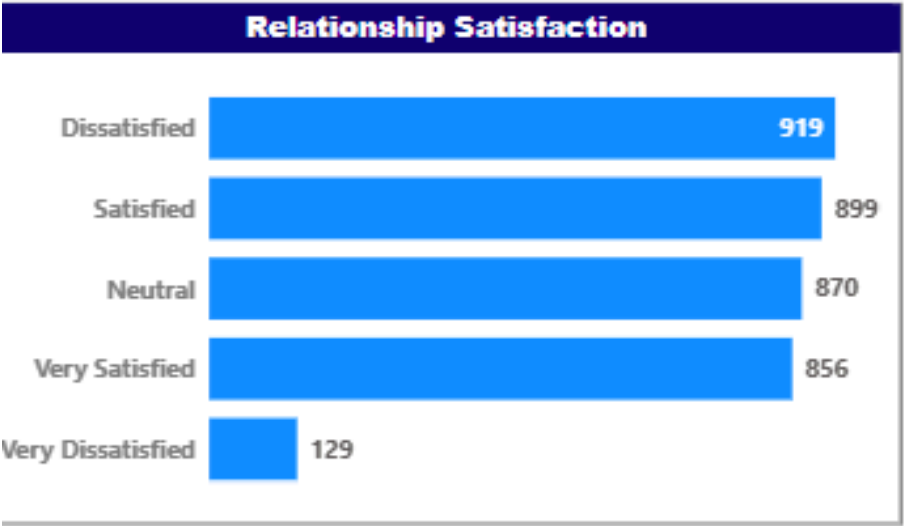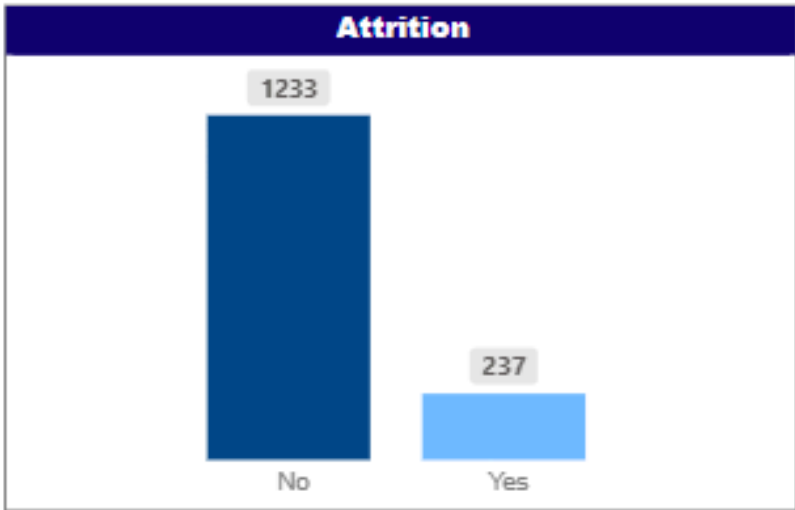| Department	Relationship Satsification	Job Satsification	Environnment Satsification	Manager Rating	Gender	Year
All	All	All	All	All	All	All

T.Employees	Avg Age	Avg Salary	Avg Experience	Attrition Rate
1.470	29	113K	5	16.12%

Distance

	792	501	177
	Far	Normal	Near

Company's Employee

Full Name	Salary	Gender	Age	Department	EducationField	RelationshipSatisfactionLevel	Jc
Zsa zsa Valentin	94,810	Female	25	Sales	Marketing	Dissatisfied	D
Zsa zsa Evered	107,863	Female	39	Sales	Technical Degree	Dissatisfied	D
Zondra Duigenan	120,858	Female	40	Technology	Information Systems	Dissatisfied	D
Zonda Lefeuvre	54,085	Female	18	Technology	Information Systems		
Zenia Rattery	23,547	Female	25	Human Resources	Human Resources	Dissatisfied	D
Zechariah Sturridge	341,971	Male	34	Sales	Marketing	Dissatisfied	D
Zebulen Rubrow	108,865	Male	26	Technology	Information Systems	Dissatisfied	D
Zarla Farrans	121,881	Female	32	Technology	Information Systems	Dissatisfied	D

Attrition

1233	237
No	Yes

Relationship Satisfaction

Dissatisfied	919
Satisfied	899
Neutral	870
Very Satisfied	856
Very Dissatisfied	129

Job Satisfaction

Dissatisfied	890
Satisfied	878
Neutral	872
Very Satisfied	865
Very Dissatisfied	123

Enviroment Satisfaction

Neutral	984
Satisfied	971
Very Satisfied	946
Dissatisfied	139
Very Dissatisfied	132

Manager Satisfaction

Meets Expectat...	985
Exceeds Expect...	970
Needs Improve...	739
Above and Bey...	700

Talent Acquisition and Recruitment Strategy:

- The geographical distribution of the workforce has direct implications for hiring.
- Defining the Talent Pool: A concentration of employees living Near the office defines the company's core local talent pool.
- Informing Role Requirements: For certain roles that require frequent on-site presence, the data can inform job descriptions.

Relationship Satisfaction	
Dissatisfied	919
Satisfied	899
Neutral	870
Very Satisfied	856
Very Dissatisfied	129

Job Satisfaction	
Dissatisfied	890
Satisfied	878
Neutral	872
Very Satisfied	865
Very Dissatisfied	123

Enviroment Satisfaction	
Neutral	984
Satisfied	971
Very Satisfied	946
Dissatisfied	139
Very Dissatisfied	132

Manager Satisfaction	
Meets Expectat...	985
Exceeds Expect...	970
Needs Improve...	739
Above and Bey...	700

Employee Experience Measurement:

- Environment Satisfaction: This metric gauges employees' feelings about their physical and psychological workspace

- Job Satisfaction: This is a core metric that measures how employees feel about the fundamental nature of their work. It assesses whether roles are engaging, appropriately challenging, and meaningful.

- Relationship Satisfaction: This dimension focuses on the social fabric of the organization. It measures the quality of employees' interactions with their colleagues, managers, and teams

Thank You