# HR ANALYSIS PROJECT REPORT

**Presented by:**
**SQL Team A**
David Bamisendun, Onyinye Oguejiofor, Judith Clement,
Aisha Suleiman, Kindness Ahoma

EVERGREEN
DIGITAL TECH
SOLUTION

# Table of Content

→ Introduction

→ Objective

→ Business Question

→ Dashboard Overview

→ Analysis and visualization

→ Recommendation

→ Conclusion

# Introduction

This project focused on analyzing an HR Analytics dataset to uncover insights into employee demographics, performance, attrition, satisfaction, and compensation.

The analysis was performed using SQL for querying and data exploration, while Power BI was used for visualization and storytelling.

The aim was to translate raw HR data into actionable insights that can support decision-making around workforce management, employee retention, and performance improvement.

# Objective

- To determine patterns and drivers of employee attrition.

- To analyse workforce distribution across departments, job roles, and education fields.

- To evaluate employee satisfaction, work-life balance, and performance.

- To identify gaps in promotions, salary hikes, and job satisfaction.

- To provide actionable recommendations for HR to improve retention, productivity, and engagement

# Business Questions

1. How many employees have left the company (Attrition = 'Yes')?
2. What is the average age of employees who left versus those who stayed?
3. How many employees in each AgeGroup have experienced attrition?
4. Which department has the highest attrition rate?
5. What is the average MonthlyIncome per Department?
6. List the top 5 job roles with the highest number of employees.
7. How many employees are at JobLevel 5 in each department?
8. What is the average YearsAtCompany for employees who travel frequently?
9. Find the average WorkLifeBalance score across departments.
10. Which JobRole has the highest average OverTime rate?
11. Compare the average MonthlyIncome by EducationField.
12. What is the distribution of Education levels across genders?
13. Which education field has the highest attrition rate?
14. How many employees received a PercentSalaryHike greater than 15% and have not been promoted in the last 3 years?
15. Identify employees with high PerformanceRating (4 or 5) but low JobSatisfaction (1 or 2).

# Dashboard Overview

Two pages representation of the HR dataset: Dashboard 1 (Workforce Profile & Demographics) and Dashboard 2 (Satisfaction & HR Metrics)



**Dashboard 1 (Workforce Profile & Demographics)**
Focused on employee counts, average age, tenure, performance ratings, income, and departmental/job role/education breakdown



**Dashboard 2 (Satisfaction & HR Metrics)**
Highlighted employee satisfaction, work-life balance, overtime, promotions, salary hikes, distance from home, and environment satisfaction.

# Analysis and visualization

| Total Employee | Average age | Avg Years at Org | Avg Performance rating |
|---|---|---|---|
| 1,470 | 37 years | 7 years | ★★★★★ 3.2 |

These cards shows the major KPI used in the analysis

| Work-life balance | Job Saqtisfaction | % Overtime | Last Promotion |
|---|---|---|---|
| ★★★★★ 2.8 | ★★★★★ 2.7 | 28% | 2 years |

## EMPLOYEE BIODATA

| Employee ID | RM001 |
|---|---|
| Age | 37 |
| Job role | Healthcare Representative |
| Montly Income | ₦6,503 |
| Years at company | 7 |
| Attrition | No |

This displays some vital information of an employee when searched.

EVERGREEN DIGITAL TECH SOLUTION

# Analysis and visualization

## Gender breakdown



588     882
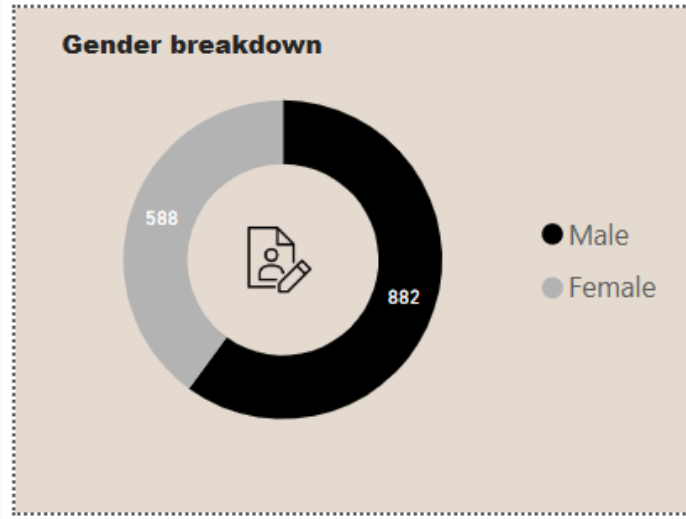
● Male
● Female

This shows the gender distribution of the employees with the number of male being higher than the female. This chart can be seen when you hover on the card showing the total employee.

## Age-group breakdown

| Age group | Count |
|-----------|-------|
| 26-35 | 606 |
| 36-45 | 468 |
| 46-55 | 226 |
| 18-25 | 123 |
| 55+ | 47 |
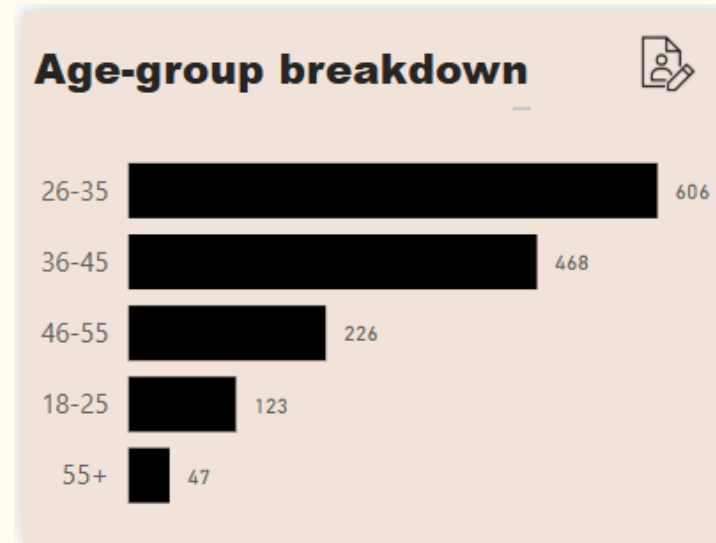
This shows the age-group distribution of the total employees with 26-35 years being the highest while 55+ age being lower, This means that majority of the employees are of a younger age distribution. This chart can be seen when you hover on the card showing average age of total employee.

# Analysis and visualization
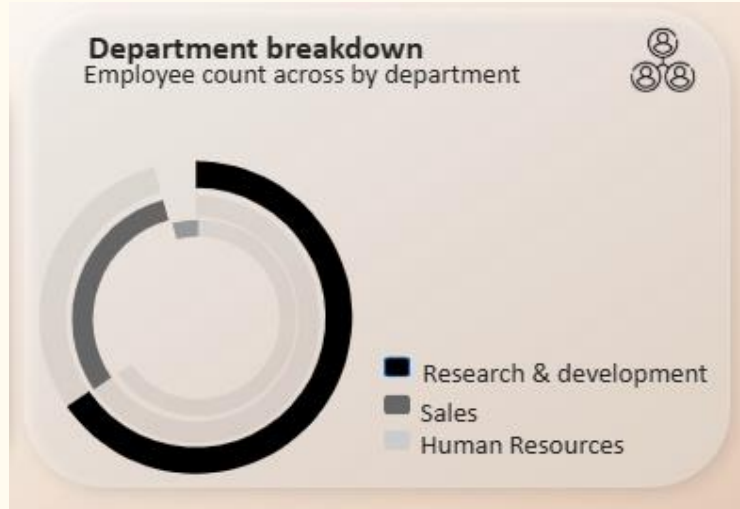


This shows the department with the highest number of employee, most employees are in Research & Development, followed by Sales, with HR having the least.
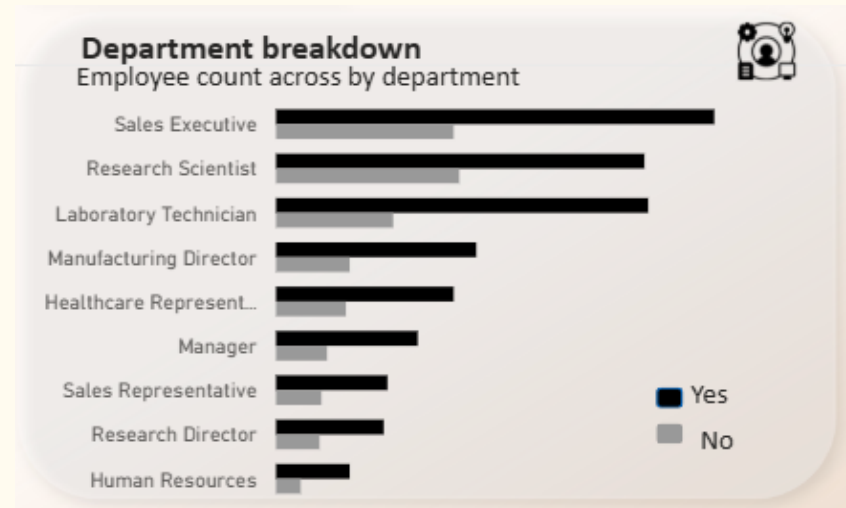


This bar chart gives the no of employees that works overtime in each department, sales executive has the highest overtime workers while the least is human resources.

# Analysis and visualization



**Performance & Pay by Education Field**
Performance and pay across departments
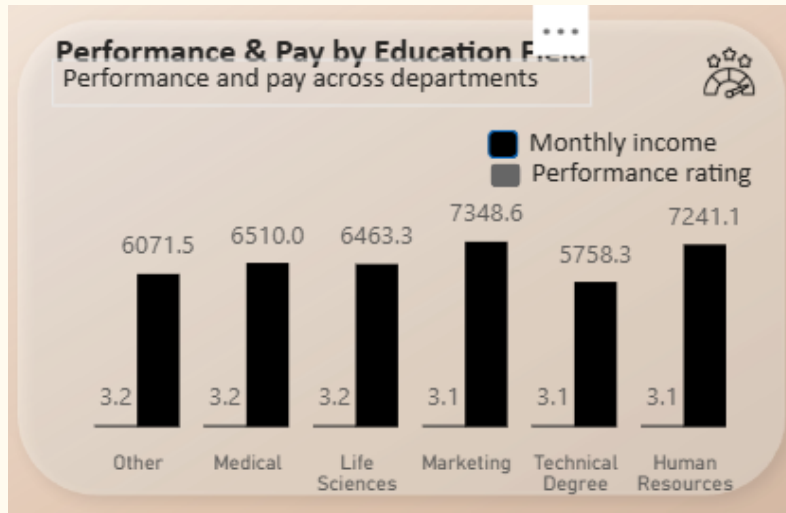
Here we have the performance and pay of the employees according to their educational field. Marketing fields have higher income while those with technical degree has the least. performance ratings are fairly stable between 3.1 and 3.2 across each department.



**Education Field breakdown**
Employee count by education field
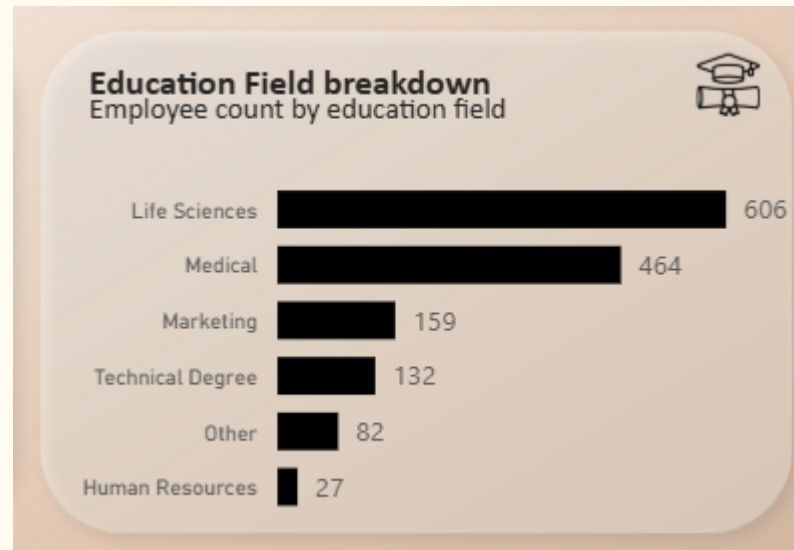
This chart shows the distribution of employee according to educational field. We have Life Sciences and Medical make up the largest educational backgrounds.

# Analysis and visualization



Job role breakdown
Job role by employee count
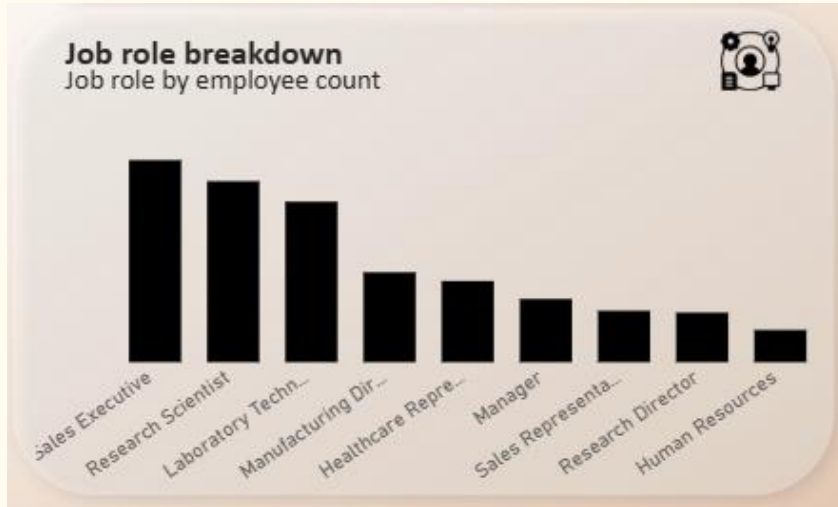
The bar chart shows the number of employee for each job role. Sales Executives and Research Scientists dominate the workforce while human resource is least.



Job level breakdown by department
Employee count across by department

| DEPARTMENT | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Human Resources | 33 | 13 | 6 | 4 | 7 |
| Research & Development | 434 | 281 | 129 | 68 | 49 |
| Sales | 76 | 240 | 83 | 34 | 13 |

The table chart shows the job level of employees in each department. Research & Development has the most employees across all job levels compared to other departments.

EVERGREEN DIGITAL TECH SOLUTION

# Analysis and visualization

**Performance Breakdown**
Employee count by performance rating

1244

1K

0K

226

3    4

Total
1470

The bar chart shows the performance rate of employees. Majority of employees rated at performance level 3, fewer at 4.

**Environmnt satisfaction**
Distribution of satisfaction rating

Average
2.72

284    287    453    446

1    2    3    4

The chart is on environment satisfaction rate of the employees. Average satisfaction is low at 2.72, with many employees rating 3 and 4.

EVERGREEN
DIGITAL TECH
SOLUTION

# Analysis and visualization



The chart shows the number of employees due for promotion. Total of 154 employees, mainly in research & development and Sales are overdue for promotion despite high hikes.
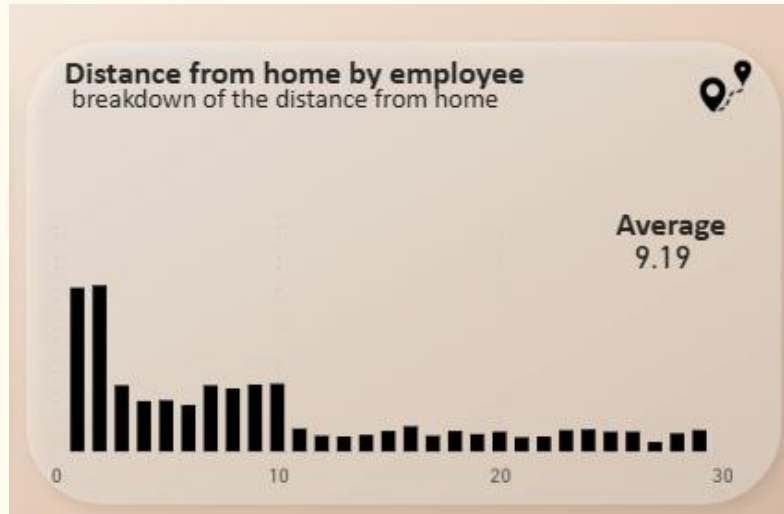


The chart is about the percentage of salary hike. Average salary hike is 15.2%; most increases fall between 10–15%

# Analysis and visualization



**Distance from home by employee**
breakdown of the distance from home

Average
9.19

The chart show the distance of employees to work.
Average distance is 9.2 km, most employees live close to the workplace.



**breakdown across departments**

| | | |
|---|---|---|
| Sales | 2.82 | ★★★ |
| Research & development | 2.73 | ★★★ |
| Human Resources | 2.82 | ★★★ |

The chart show work life balance of employees across various departments. This chart can be when work-life balance card is hovered on.

# Analysis and visualization

## Attrition-Focused Insights (Employees Who Left)

**Key Metrics (KPI Cards)**
- **Total Attrition:** 237 employees left the company (87 females, 150 males).
- **Demographics:** Average age is **34 years** (younger than the company-wide average of 37).
- **Tenure:** On average, they spent **5 years** at the organization before leaving.
- **Performance:** Average rating is **3.2/5**, meaning most leavers were *not low performers*.
 This shows that younger employees with mid-level tenure are leaving despite decent performance scores.

**Workforce Profile of Leavers**
- **Department Breakdown:** Majority of leavers came from **Research & Development**, followed by **Sales**. HR saw the least exits.
- **Performance & Pay by Education Field:** Employees from **Marketing fields** earned higher income but still left, with an average performance rating of **3.1**.
- **Job Role Breakdown: Laboratory Technicians** and **Sales Executives** were the job roles most likely to leave.
- **Education Field Breakdown: Life Sciences (89)** and **Medical (63)** backgrounds contributed the largest share of attrition.
- **Job Level by Department: Research & Development at Job Level 1** saw the highest exits, showing that entry-level technical roles are most vulnerable.
 Attrition is concentrated in technical and sales roles, especially among younger, lower-level employees with life science/medical backgrounds.

# Analysis and visualization

## Attrition-Focused Insights (Employees Who Left)

- **Work-Life Balance:** Average rating only **2.7/5**.
- **Job Satisfaction:** Lower at **2.5/5** (a key attrition driver).
- **Overtime:** Extremely high, **54%** worked overtime regularly.
- **Promotion:** Average last promotion was **2 years ago**; 154 employees (mainly in R&D & Sales) were overdue for promotion.
- **Performance Breakdown: 200 leavers** were rated performance level 3, and **37 were level 4** — confirming that even solid performers are leaving.
- **Distance from Home:** Average commute was **10.6 km**; distance is not a major factor.
- **Salary Hike Distribution:** Leavers had an **average hike of 15.1%**, with most between 10–15%, yet still left.
- **Environment Satisfaction:** Very low at **2.46/5**, with most giving ratings of **1 or 3**.

Employees are not leaving because of pay or commute, but mainly due to **poor satisfaction, limited promotions, long overtime hours, and weak work-life balance.**

# Recommendation

1. **Target R&D and Sales Retention Programs:** Since most leavers are from these departments, focus engagement, mentoring, and career development here.

2. **Reduce Overtime Pressure:** High overtime (54%) signals workload imbalance, enforce workload redistribution or hire additional staff.

3. **Enhance Job Satisfaction & Work Environment:** With environment satisfaction at 2.46 and job satisfaction at 2.5, HR must invest in employee wellness, recognition, and team culture.

4. **Promotion & Career Growth:** Address overdue promotions, especially for entry-level R&D staff, by introducing transparent growth pathways.

5. **Support Young Professionals:** Attrition is highest among employees aged 34 with 5 years of stay in the organisation, introduce retention incentives and mentorship programs for this segment

# Conclusion

The attrition analysis reveals a **critical retention challenge**: younger, mid-tenure, technically skilled employees in R&D and Sales are leaving despite fair pay and performance ratings. The root causes are **job dissatisfaction, lack of promotions, poor work-life balance, and high overtime**. Addressing these non-monetary factors will be key to reducing turnover and building a more engaged, stable workforce.

# THANK YOU