HR Analytics Dashboard

Analyzing Workforce Trends for Strategic HR Planning

HR Analytics Dashboard Documentation

Project Title: HR Analytics Dashboard

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Role: Data Analyst

Tool Used: Microsoft Power BI

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1. Overview

The HR Analytics Dashboard is an interactive Power BI report that provides a comprehensive analysis of employee attrition patterns across departments, age groups, job roles, and satisfaction levels. It was created to help HR departments make data-driven retention decisions and identify critical areas contributing to employee turnover.

2. Objective

The goal of this project is to:
- Identify high-risk attrition segments
- Analyze relationships between job satisfaction, tenure, and attrition
- Explore demographic patterns (age, gender, education) influencing attrition
- Enable HR managers to take actionable steps to improve employee retention

3. Dataset Summary

- Total Employees: 1,470
- Total Attrition: 237
- Attrition Rate: 16.12%
- Average Age: 36.92 years
- Average Salary: $6.50K
- Average Tenure: 7 years
- Gender Distribution: 588 Female, 882 Male
- Departments Covered: Human Resources, Sales, Research & Development

4. Dashboard KPIs

Displayed as dynamic cards:
- Total Employee Count
- Attrition Count & %
- Average Age of Employees
- Average Tenure
- Average Monthly Salary

5. Visual Components

- Bar Chart – Age-Based Attrition
- Bar Chart – Attrition by Role & Satisfaction (JobSatisfaction Level 1-4)
- Waterfall Chart – Tenure-wise Attrition Trend
- Donut Chart – Field of Study vs. Attrition
- KPI Cards – Highlighting attrition %, salary, tenure, etc.
- Toggle Button – Dark/Light Theme
- Slicers – Filter by Department, Gender, Job Role

6. Insights & Analysis

📌 Age Group Impact:
- Employees aged 26-35 show the highest attrition (116+ cases)
- Employees under 25 and over 55 show relatively lower attrition

📌 Tenure Pattern:
- Peak attrition occurs in the 1–5 year experience range
- Significant drop observed after 10+ years in tenure

📌 Role-based Insight:
- Human Resource and Research Scientist roles show high turnover
- Research Director has 100% attrition but likely low employee count

📌 Job Satisfaction Impact:
- Majority of attrition falls under Satisfaction Levels 1 & 2
- High satisfaction (Levels 3–4) corresponds to lower attrition

📌 Education Field Insight:
- Life Sciences (38%) and Medical (29%) dominate attrition share
- Technical disciplines show lower attrition comparatively

7. Filters & Interactivity

The dashboard allows real-time dynamic filtering for:
- Gender (Male/Female)
- Department (HR, Sales, R&D, etc.)
- Theme Toggle (Dark / Light Mode)
- Role-wise exploration via slicers
- Tooltip hover details for precision insights

8. Challenges Faced

- Balancing aesthetics with data density – resolved by modular design
- Missing or skewed data – handled via filters and cleaning
- Interpreting categorical fields – normalized values using DAX
- Visual overload – addressed by grouping insights and allowing drill-down

9. Future Enhancements

- Add predictive attrition modeling using ML in Power BI or Python
- Historical trend visualization across quarters/years
- Exportable summary for managers (PDF reports)

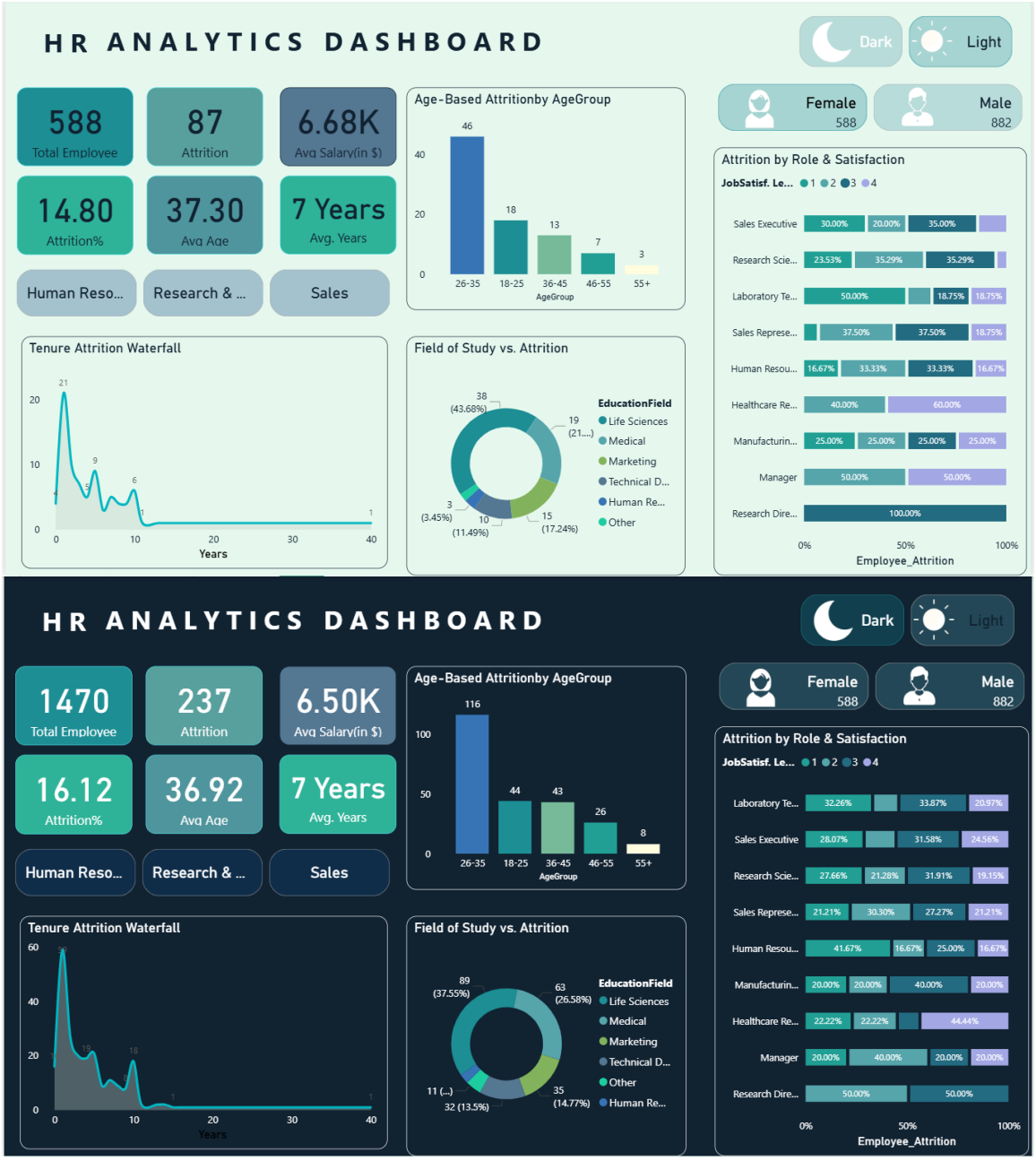
- Mobile-optimized layout for executives on the go
- Integrate with live HRMS or Excel uploads for automation

10. Conclusion

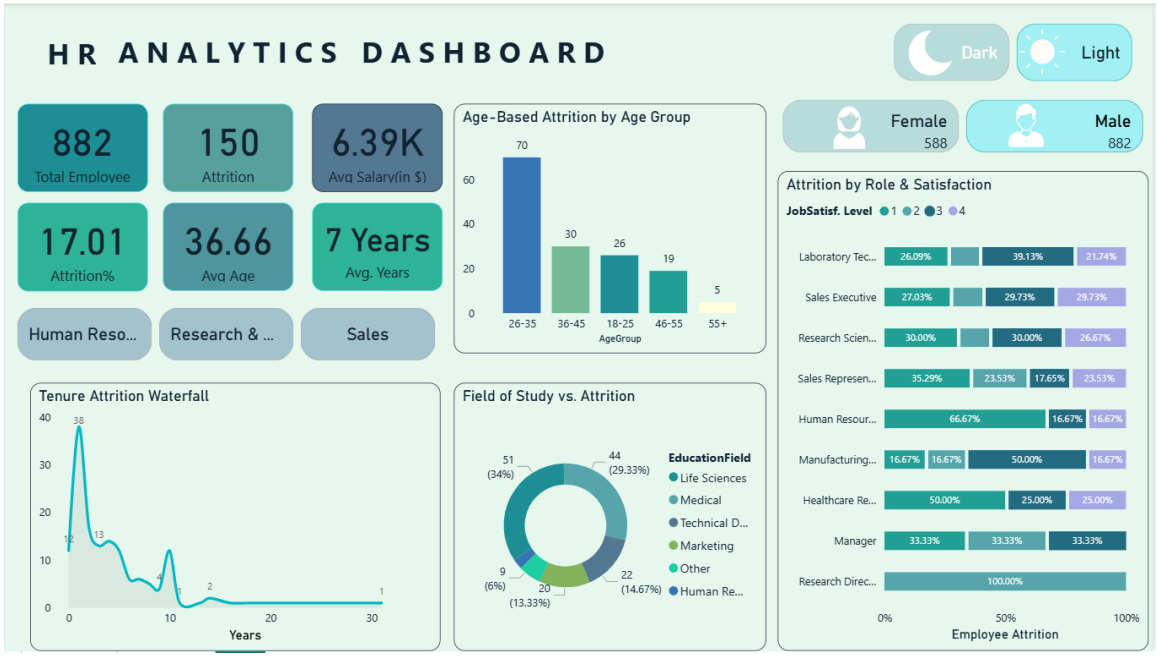
The HR Analytics Dashboard effectively highlights attrition risks and supports HR teams with data-backed decision-making. It provides a clear, accessible, and scalable solution to track employee retention trends across various parameters like age, tenure, job role, and satisfaction.

This dashboard can be used in:
- Portfolio Demonstrations
- Academic/Capstone Projects
- Business HR Strategy Meetings
- Recruitment and Retention Campaigns

11. Screenshots


HR ANALYTICS DASHBOARD
Dark
Light
588
Total Employee
87
Attrition
6.68K
Avg Salary(in $)
14.80
Attrition%
37.30
Avg Age
7 Years
Avg. Years
Human Reso...
Research & ...
Sales
Age-Based Attritionby AgeGroup
46
18
13
7
3
40
20
0
26-35
18-25
36-45
46-55
55+
AgeGroup
Female
588
Male
882
Attrition by Role & Satisfaction
JobSatisf. Le... 1 2 3 4
Sales Executive 30.00% 20.00% 35.00%
Research Scie... 23.53% 35.29% 35.29%
Laboratory Te... 50.00% 18.75% 18.75%
Sales Represe... 37.50% 37.50% 18.75%
Human Resou... 16.67% 33.33% 33.33% 16.67%
Healthcare Re... 40.00% 60.00%
Manufacturin... 25.00% 25.00% 25.00% 25.00%
Manager 50.00% 50.00%
Research Dire... 100.00%
0%
50%
100%
Employee_Attrition
Tenure Attrition Waterfall
21
9
6
1
20
10
0
0
10
20
30
40
Years
Field of Study vs. Attrition
38
(43.68%)
19
(21....)
15
(17.24%)
10
(11.49%)
3
(3.45%)
EducationField
Life Sciences
Medical
Marketing
Technical D...
Human Re...
Other

HR ANALYTICS DASHBOARD
Dark
Light
1470
Total Employee
237
Attrition
6.50K
Avg Salary(in $)
16.12
Attrition%
36.92
Avg Age
7 Years
Avg. Years
Human Reso...
Research & ...
Sales
Age-Based Attritionby AgeGroup
116
44
43
26
8
100
50
0
26-35
18-25
36-45
46-55
55+
AgeGroup
Female
588
Male
882
Attrition by Role & Satisfaction
JobSatisf. Le... 1 2 3 4
Laboratory Te... 32.26% 33.87% 20.97%
Sales Executive 28.07% 31.58% 24.56%
Research Scie... 27.66% 21.28% 31.91% 19.15%
Sales Represe... 21.21% 30.30% 27.27% 21.21%
Human Resou... 41.67% 16.67% 25.00% 16.67%
Manufacturin... 20.00% 20.00% 40.00% 20.00%
Healthcare Re... 22.22% 22.22% 44.44%
Manager 20.00% 40.00% 20.00% 20.00%
Research Dire... 50.00% 50.00%
0%
50%
100%
Employee_Attrition
Tenure Attrition Waterfall
60
40
20
0
19
18
1
1
0
10
20
30
40
Years
Field of Study vs. Attrition
89
(37.55%)
63
(26.58%)
35
(14.77%)
32 (13.5%)
11 (...)
EducationField
Life Sciences
Medical
Marketing
Technical D...
Other
Human Re...


HR ANALYTICS DASHBOARD
Dark
Light
882
Total Employee
150
Attrition
6.39K
Avg Salary(in $)
17.01
Attrition%
36.66
Avg Age
7 Years
Avg. Years
Human Reso...
Research & ...
Sales
Age-Based Attrition by Age Group
70
30
26
19
5
26-35
36-45
18-25
46-55
55+
AgeGroup
Female
588
Male
882
Attrition by Role & Satisfaction
JobSatisf. Level 1 2 3 4
Laboratory Tec...
Sales Executive
Research Scien...
Sales Represen...
Human Resour...
Manufacturing...
Healthcare Re...
Manager
Research Direc...
Employee Attrition
Tenure Attrition Waterfall
Years
Field of Study vs. Attrition
51 (34%)
44 (29.33%)
9 (6%)
20 (13.33%)
22 (14.67%)
EducationField
Life Sciences
Medical
Technical D...
Marketing
Other
Human Re...