

HR Analytics Dashboard and Insights

A Comprehensive Overview of Workforce Dynamics

Team Members

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Dataset and Highlights

Dataset Contains 15 columns and 15000 rows

Tool Used : **Power Bi**

| Employee_ID | Department | Job_Role | Age | Gender | Date_of_Joining | Tenure_Years | Salary | Performance_Rating | Training_Hours | Engagement_Score | Satisfaction_Score | Training_Need | Turnover | Hire_Time_Days |
|-------------|------------|----------------------|-----|--------|-----------------|--------------|--------|--------------------|----------------|------------------|--------------------|---------------|----------|----------------|
| 1 | HR | Recruitment Manager | 24 | Female | 16-05-2021 | 3 | 107013 | 4 | 30 | 79 | 80 | No | No | 28 |
| 2 | Finance | Financial Analyst | 40 | Male | 22-12-2021 | 2 | 52429 | 5 | 21 | 94 | 95 | Yes | No | 19 |
| 3 | Operations | Operations Manager | 52 | Male | 05-07-2015 | 9 | 86372 | 4 | 25 | 99 | 90 | Yes | No | 45 |
| 4 | HR | Recruitment Manager | 25 | Male | 23-03-2019 | 5 | 52225 | 4 | 50 | 100 | 50 | No | No | 36 |
| 5 | IT | Data Scientist | 26 | Male | 08-07-2023 | 1 | 114384 | 2 | 20 | 69 | 84 | No | Yes | 35 |
| 6 | Finance | Financial Analyst | 28 | Female | 01-02-2023 | 1 | 112255 | 3 | 50 | 67 | 85 | No | No | 49 |
| 7 | IT | Data Scientist | 50 | Male | 16-09-2021 | 3 | 118156 | 4 | 25 | 96 | 65 | No | Yes | 26 |
| 8 | Sales | Sales Representative | 52 | Male | 24-12-2019 | 4 | 51773 | 2 | 14 | 62 | 55 | No | No | 48 |
| 9 | Marketing | Marketing Analyst | 35 | Female | 05-12-2022 | 1 | 115981 | 3 | 33 | 91 | 92 | No | Yes | 54 |
| 10 | Sales | Sales Representative | 59 | Female | 28-11-2020 | 3 | 64953 | 2 | 6 | 77 | 57 | Yes | No | 25 |
| 11 | Marketing | Digital Marketer | 25 | Male | 29-09-2024 | 0 | 59183 | 2 | 7 | 96 | 90 | Yes | Yes | 55 |
| 12 | IT | Software Engineer | 47 | Male | 15-07-2018 | 6 | 88514 | 1 | 7 | 98 | 51 | Yes | No | 26 |
| 13 | Operations | Operations Manager | 52 | Male | 29-05-2023 | 1 | 48006 | 1 | 39 | 87 | 89 | Yes | No | 19 |
| 14 | IT | Software Engineer | 41 | Female | 10-03-2017 | 7 | 97156 | 2 | 8 | 92 | 79 | Yes | No | 59 |
| 15 | HR | HR Generalist | 38 | Female | 13-08-2019 | 5 | 101632 | 5 | 15 | 73 | 99 | Yes | No | 25 |
| 16 | IT | Data Scientist | 55 | Female | 13-03-2017 | 7 | 55363 | 5 | 33 | 71 | 50 | No | No | 51 |
| 17 | Finance | Financial Analyst | 44 | Female | 07-06-2016 | 8 | 72890 | 2 | 40 | 60 | 79 | Yes | No | 17 |
| 18 | Finance | Financial Analyst | 30 | Male | 30-01-2019 | 5 | 103154 | 3 | 44 | 78 | 93 | No | No | 55 |
| 19 | Finance | Financial Analyst | 41 | Female | 18-11-2023 | 0 | 94318 | 1 | 5 | 98 | 62 | No | Yes | 29 |
| 20 | Operations | Operations Manager | 46 | Female | 27-04-2017 | 7 | 44134 | 4 | 49 | 96 | 76 | Yes | Yes | 19 |
| 21 | Marketing | Marketing Analyst | 50 | Female | 05-02-2020 | 4 | 113584 | 5 | 5 | 62 | 81 | No | No | 44 |
| 22 | Sales | Sales Representative | 34 | Male | 01-07-2016 | 8 | 57107 | 1 | 30 | 86 | 70 | Yes | No | 60 |
| 23 | Sales | Sales Executive | 34 | Male | 28-01-2016 | 8 | 119738 | 2 | 24 | 77 | 94 | Yes | Yes | 40 |
| 24 | Operations | Operations Manager | 23 | Female | 08-06-2020 | 4 | 99372 | 1 | 21 | 68 | 91 | No | Yes | 24 |
| 25 | Marketing | Marketing Analyst | 24 | Male | 07-11-2022 | 1 | 66966 | 3 | 40 | 80 | 73 | Yes | No | 59 |
| 26 | Finance | Financial Analyst | 51 | Female | 05-05-2024 | 0 | 88817 | 5 | 16 | 73 | 74 | No | Yes | 24 |

employee dataset

Employee_ID: A unique identifier for each employee, ensuring we can track individual data points.

Department and Job_Role: These columns help us understand workforce distribution across teams and specific roles.

Age, Gender, and Tenure_Years: Critical demographic details that allow us to analyze diversity, experience, and retention trends.

Date_of_Joining: This helps us identify hiring patterns over time.

Salary and Performance_Rating: These metrics provide insights into compensation and individual contributions.

Training_Hours and Training_Need: These reflect skill development efforts and areas where additional training might be required.

Engagement_Score and Satisfaction_Score: Two essential measures of employee morale and productivity.

Turnover: This indicates whether an employee has left the company, a key metric for analyzing retention.

HR_ANALYTICS [Workforce Demographics & Diversity]

Overall Employees

15000

Turnover percentage

19.69%

Average Age

41

Average Salary

80.16K

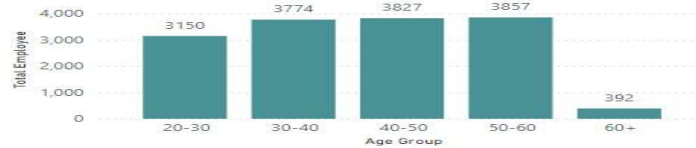
Year Of The Company

10

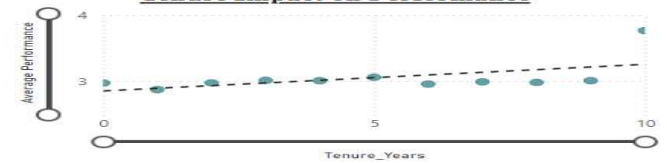
Gender



Age Distribution



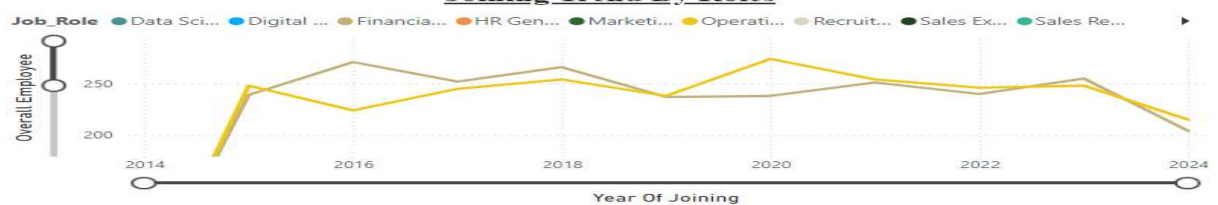
Tenure Impact on Performance



Employees per Department



Joining Trend By Roles



final_hr_Workforce Demographics & Diversity
Live data Data updated on 26/11/24, 11:04 am

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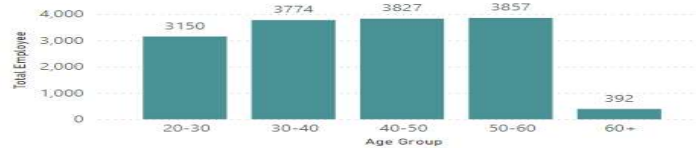
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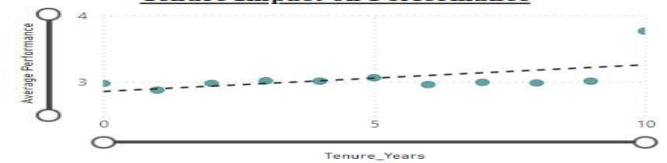
Gender



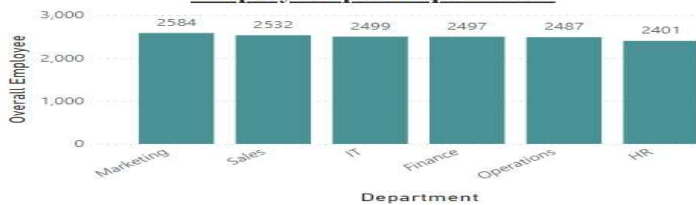
Age Distribution



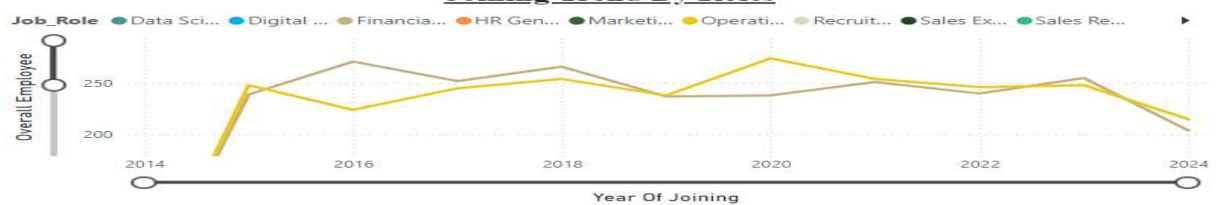
Tenure Impact on Performance



Employees per Department



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Insights And Analysis [Workforce demographics and diversity]

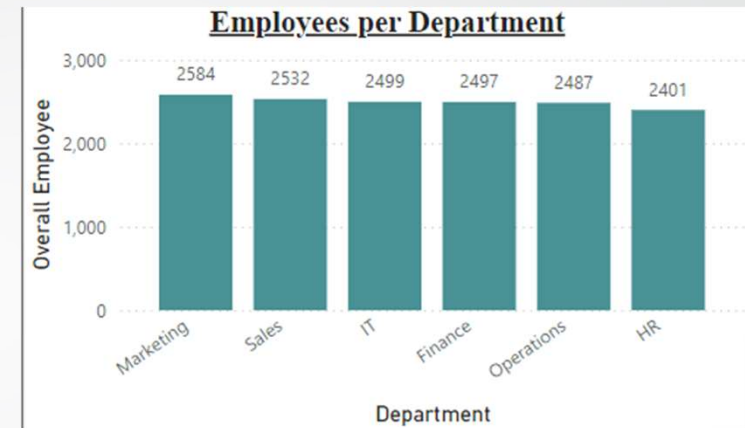
- **10** years of building a diverse and dynamic workforce
- There is a total of **15000** Employee.
- Average Age is **41**

Correlation Between Tenure and Performance: The plot reveals how employee performance ratings vary with tenure, highlighting whether longer tenure correlates with higher or stable performance levels

Generational and Experience Dynamics:For instance, mid-career employees might show the highest performance due to a balance of experience and motivation, whereas early-career or late-career employees could display more variability based on learning curves or retirement approaches.

Hiring Patterns Across Roles: revealing trends like increased demand for specific roles due to organizational growth or shifts in business priorities.

Performance Peaks at Certain Career Stages: older employees with longer tenure could either demonstrate consistent high performance or experience burnout or disengagement.



DAX Measures Used :
Turnover Percent

HR Analytics [Skills, Training, and Development]

Total Training Hour

412K

Invested Training Hour

27.49

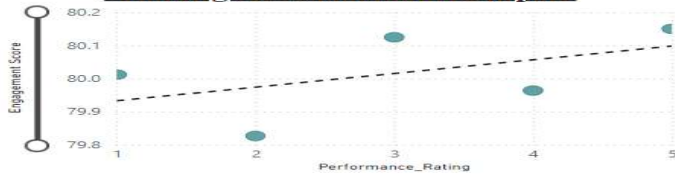
Training Needed

50.51%

Gender



Training vs. Performance Impact



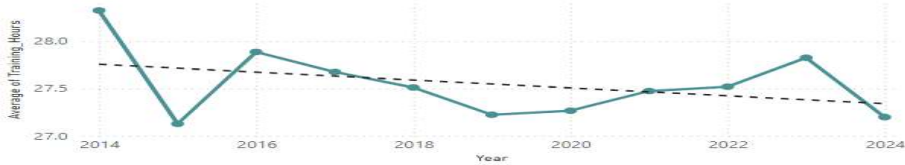
Performance vs. Training Hours



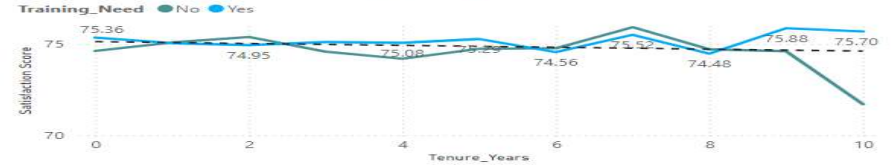
Skill Gap



Training Trends Over Time



Tenure Impact on Satisfaction



final_hr_Skills, Training, and Development
Live data Data updated on 26/11/24, 11:04 am

HR Analytics [Skills, Training, and Development]

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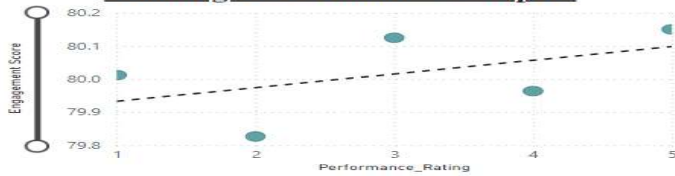
Training Needed

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Gender



Training vs. Performance Impact



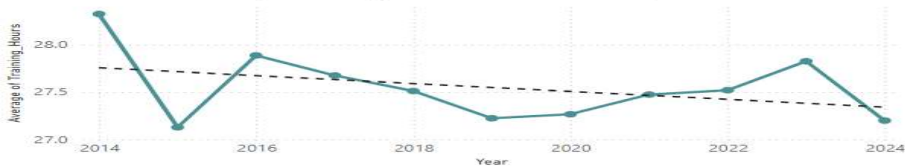
Performance vs. Training Hours



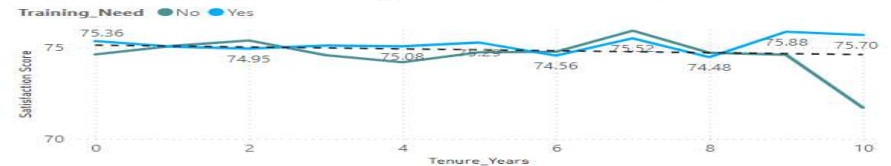
Skill Gap



Training Trends Over Time



Tenure Impact on Satisfaction



final_hr_Skills, Training, and Development
Live data Data updated on 26/11/24, 11:04 am

Insights And Analysis [Skills, Training, and Development]

- Around 50% Employee need the training
- Total training hours provided by the Company is 412K
- 27+ hrs of average training per person

Training Hours vs. Performance Impact: Employees with higher training hours tend to have better performance ratings. Focus training efforts on employees with low performance scores to uplift overall productivity

performance vs training in the highest training shows low performance rating

Training Effectiveness Issues: The training content or methods may not be adequately addressing the employees

Overtraining Fatigue: Excessive training hours could lead to burnout or diminished productivity

high skill gap but increase in training trends

The organization recognizes the skill gap and is actively addressing it through increased training efforts

Increased Satisfaction with Training Needs: Employees who are identified as needing training show higher satisfaction scores over time, possibly because the organization invests in their development, making them feel valued

Invest in Career Development Pathways: Develop programs that cater to long-term career growth, such as leadership development

Skill Gap



DAX Measures Used :

Training Percentage

Training needed



Insights And Analysis [salary distribution and pay equity]

- 3753 earn above 1 lakh
- Highest average salary per department is 80k
- Salary is 5.16 above the benchmark

Income Disparity: The low contribution of the first quartile to total salary expense suggests a steep pay disparity between the lowest and highest earners.

Introduce policies to ensure a more equitable distribution of salaries

The lower average salary for the 10+ year group may indicate **salary stagnation** for long-tenured employees.

A smaller cohort of 17 employees suggests limited progression opportunities or attrition within this group

Employees in these roles may perceive limited career advancement, risking turnover.

Addressing stagnation.

Can show which **percentiles (e.g., 75%)** contribute the most to total salary.

Using **Sunburst visualization** here I can filter every aspect of the salary ratio or salary over tenure or Hike on salary based on department, Job, roles and Gender

Salary Distributions by Department >
Job Role > Gender



Sunburst diagram

DAX Measures Used :

Highest Earner count

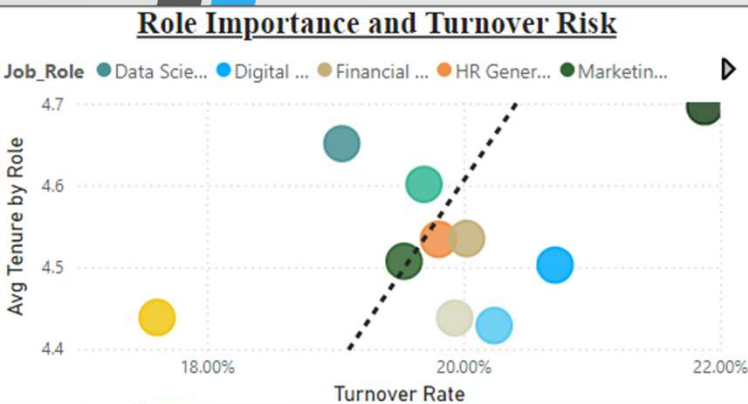
Salary vs Benchmark

Avg. salary by Tenure group

Avg. salary by year



Insights And Analysis [Strategic Workforce Planning]



- Average Tenure by role is 4.5 years
- Turnover rate by year is 20.08%

The **Turnover Pipeline Simulation** shows that the highest turnover occurs among employees within their Job roles in a department

The **Role Importance and Turnover Risk Scatter Plot** reveals that key technical roles have high turnover risk but are also critical to business operations.

Investing in retention strategies such as competitive compensation, upskilling, and career development for these roles can mitigate business risks.

The **Future Workforce Forecast** predicts a declining headcount in the department due to higher turnover and slower hiring rates compared to other departments.

Analysis: A targeted hiring campaign or improved retention strategies can help sustain operational efficiency and avoid skill gaps.

Financial Analysts exhibit the highest turnover rate compared to other roles in the organization. Financial Analyst roles often involve high-pressure tasks, deadlines, and long hours, which may lead to burnout and higher turnover

The net workforce change has remained relatively stable over the past few years, indicating a balance between hiring and turnover.

DAX Measures Used :

Net Workforce Change

Turnover risk

Average tenure by role

Key Takeaways and Conclusion

- The organization shows a balanced age distribution but faces gaps in generational diversity in certain roles.
- Departments with lower diversity indices highlight areas for inclusion-focused recruitment and retention efforts.

- Training programs demonstrate varied impacts, with high training hours not always correlating with higher performance, signaling a need for more targeted skill development.
- Departments with significant skill gaps but improving training trends indicate potential future improvements in productivity and satisfaction.
- Employees requiring training report higher satisfaction, showcasing the positive psychological impact of organizational investment.

- Salary disparities are evident, with the first quartile contributing only 15% of the total salary pool, highlighting potential income inequality.
- Employees with over 10 years of tenure show relatively lower average salaries despite long service, which could indicate stagnation or underappreciation.

- ❖ Roles with high turnover, such as Financial Analysts, require immediate retention strategies, possibly through enhanced engagement and compensation packages.
- ❖ Stable workforce trends indicate consistent hiring practices but may mask underlying turnover risks in critical roles.
- ❖ Engagement scores strongly correlate with retention,

| Job_Role | Count of Employee |
|----------------------|-------------------|
| Financial Analyst | 2497 |
| Operations Manager | 2487 |
| Sales Executive | 1298 |
| Marketing Analyst | 1295 |
| Digital Marketer | 1289 |
| Software Engineer | 1255 |
| Data Scientist | 1244 |
| Sales Representative | 1234 |
| HR Generalist | 1232 |
| Recruitment Manager | 1169 |