

Project Title: *Unraveling Workforce Dynamics – A Deep Dive into HR Analytics*

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Tool Used: Microsoft Excel

Dataset: 1470 Employees – HR Data

1. Project Overview

This project aims to transform raw HR data into a compelling, insight-rich dashboard using Excel. The primary objective was to explore workforce dynamics such as attrition, job satisfaction, departmental differences, and demographic patterns to empower HR teams with data-driven decisions.

2. Data Preparation

The dataset underwent comprehensive cleaning and preprocessing steps:

- Removed duplicates and blank entries
- Standardized values in columns (e.g., gender, job roles, business travel)
- Converted data types (e.g., dates, numbers) for Excel analysis
- Filtered out irrelevant columns for a focused dashboard

3. Key Metrics Analyzed

- **Total Employees:** 1,470
- **Total Attrition:** 237 employees
- **Attrition Rate:** 16.1%
- **Average Age:** 37 years
- **Job Satisfaction Average Score:** 2.6 / 5

4. Insights Extracted

A. Department-Wise Attrition

- **Sales Department:** Highest attrition (56.12%)
- **HR & R&D:** Relatively lower attrition
Recommendation: Investigate work pressure & compensation in sales

B. Education-Level Attrition

- **Bachelor's Degree holders:** Highest exit count (99)
Recommendation: Introduce upskilling & career progression programs

C. Marital Status Impact

- **Married Employees:** Lower Attrition (46%)
- **Single/Divorced:** Higher attrition (54%)
Recommendation: Offer personalized engagement/benefits plans

D. Age-Based Trends

- **25–34 Age Group:** Most prone to leave (112 exits)
- **<25 and >55 Age Groups:** Stable workforce ends
Recommendation: Build early-career mentorship & loyalty programs





E. Business Travel & Daily Rates

- Employees who **travel frequently** earn **less** on average
Recommendation: Review workload vs. compensation balance

F. Standard Hours & Productivity

- **Younger employees (25–34)** work longer hours
Recommendation: Monitor burnout; promote work-life balance

5. Strategic Recommendations

Area	Action
 Retention Strategy	Focused support for Sales and young professionals
 Upskilling Plans	Offer growth paths to bachelor's-level employees
 Employee Well-being	Promote flexible work policies & satisfaction initiatives
 Cost Optimization	Align travel load with compensation policies

6. Conclusion

The HR analytics dashboard transforms workforce data into strategic insight. It helps organizations not only **understand attrition** but also take **data-driven action** to retain top talent, improve job satisfaction, and optimize HR efforts.

“The future of HR lies not in guessing—but in analyzing.”

Included in this Project

- HR_Analytics_Dashboard.xlsx – Final dashboard
- Employee_Data_Cleaned.csv – Cleaned dataset
- README.md – Project summary
- Insights_Documentation.pdf – Insight explanation **[this file]**

