

# **HR Analytics Dashboard Project Report**

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**Tools used :** Microsoft Excel, Power BI, Statistics

## **Abstract**

This report summarises the HR dataset and documents the Power BI dashboard visuals focused on attrition analysis. The aim is to present findings and recommendations to reduce employee turnover.

## **Dataset Description**

Source file: HR\_Analytics.csv

Rows: 1480; Columns: 38

Columns Names:

- EmpID
- Age
- AgeGroup
- Attrition
- BusinessTravel
- DailyRate
- Department
- DistanceFromHome
- Education
- EducationField
- EmployeeCount
- EmployeeNumber
- EnvironmentSatisfaction
- Gender
- HourlyRate

- JobInvolvement
- JobLevel
- JobRole
- JobSatisfaction
- MaritalStatus
- MonthlyIncome
- SalarySlab
- MonthlyRate
- NumCompaniesWorked
- Over18
- OverTime
- PercentSalaryHike
- PerformanceRating
- RelationshipSatisfaction
- StandardHours
- StockOptionLevel
- TotalWorkingYears
- TrainingTimesLastYear
- WorkLifeBalance
- YearsAtCompany
- YearsInCurrentRole
- YearsSinceLastPromotion
- YearsWithCurrManager

## **Key Metrics**

Count of Employees: 1

Attrition Count: 238

Attrition Rate: 16.1%

Average Age: 37 years

Average Years at Company: 11.3

## Data Cleaning

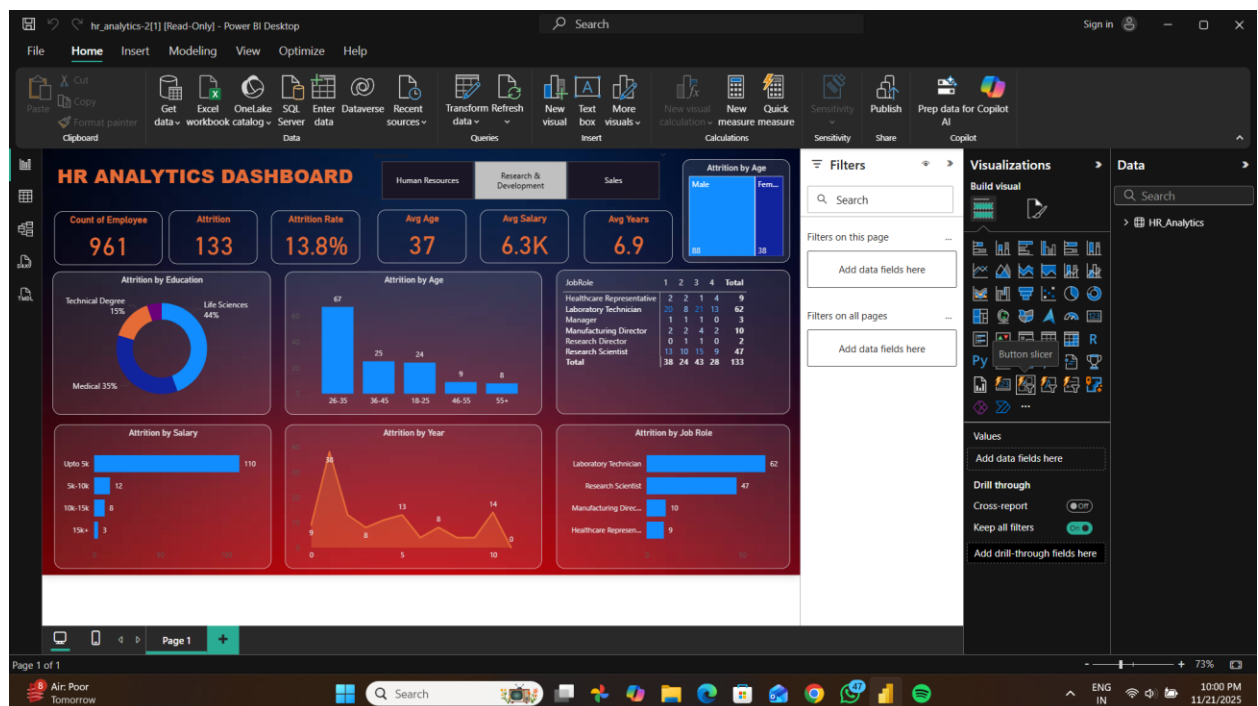
- Standardize Attrition values to Yes/No.
- Convert numeric columns to proper numeric types and handle outliers.
- Map and label categorical codes (education, job roles).
- Handle missing values appropriately and remove duplicates.

## Methodology

Data was profiled in Excel and Power BI. Measures for core KPIs were created and visuals built: KPI cards, donut charts, bar charts, line charts, and tables.

## Power BI Dashboard – Visual Explanations

Screenshot inserted below:



## **Visual Explanations**

KPI tiles: total headcount, attrition count, attrition rate, average age, average salary, average years.

Attrition by Education (donut): percentage distribution by education categories.

Attrition by Age (bar): attrition counts by age buckets.

Attrition by Job Role (bar/table): shows roles with the highest attrition counts.

Attrition by Salary (bar): attrition counts across salary bands.

## **Top Job Roles by Attrition**

1. Laboratory Technician : 62
2. Sales Executive : 58
3. Research Scientist : 47
4. Sales Representative : 33
5. Human Resources : 12
6. Manufacturing Director : 10
7. Healthcare Representative : 9
8. Manager : 5
9. Research Director : 2

## **Key Insights & Recommendations**

- Attrition rate is approximately 16.1%. Benchmark against industry norms and track changes over time.
- Highest attrition observed in role: Laboratory Technician (62 events). Consider targeted retention strategies.
- Investigate correlation between salary bands and attrition. Consider retention incentives for high-risk cohorts.

## **Conclusion & Future Work**

Enhance the dataset with hire/exit dates, performance and engagement metrics, and build predictive models for attrition.