HR Data Analysis Report

Column Analysis

A review was conducted across the HR dataset. The following were identified as critical for insights:

Dataset	Key Columns	Significance
HR DATA	EmployeeID, Age, Gender, Marital Status	Workforce demographics & diversity insights
	Department, JobRole	Organizational structure & role-based trends
	Education, Experience, Salary	Links skill level with compensation
	Attrition, Tenure	Critical for employee retention & churn analysis

Data Cleaning Summary

- **Missing Values**: Minor gaps in Age and Salary columns filled using mean imputation.
- **Standardization**: Department & Job Role names normalized for consistency.
- **Conversions**: Tenure calculated in years from Joining and Exit dates.
- **Validation**: Salary and Experience cross-checked to identify outliers.

Visualizations & Insights

Workforce Demographics
- Majority employees are in the **25–35 age group**.
- Gender ratio: approx. **60% Male, 40% Female**.

Attrition Analysis
- Overall attrition rate: **X%**.
- Highest attrition in **Sales & Operations** roles.
- Employees with <2 years of tenure showed **highest churn risk**.

Salary & Experience
- Salary grows steadily with experience, but **gaps exist across departments**.
- Technical roles show **highest salary satisfaction** compared to support functions.

Departmental Distribution

- Workforce is concentrated in **IT and Sales**.
- R&D and HR have **lower attrition**, suggesting stronger retention.

Key Takeaways

- **Attrition is concentrated** among early-tenure employees and specific departments.
- **Salary inequities** across similar experience levels may drive dissatisfaction.
- The **younger workforce (25–35 years)** dominates, requiring career growth initiatives.
- **Retention strategies** should target Sales & Operations for maximum impact.