Project Title: In-Depth HR Analytics for Strategic Decision-Making

Objective:

This project focused on conducting a comprehensive analytical study of the organization's HR data to uncover data-driven insights that enhance employee retention, satisfaction, productivity, and performance. Key demographic segments such as department, age, gender, education, and job roles were analyzed to drive actionable HR strategies.

Key Goals:

- Determine overall and segmented employee attrition rates by department, age group, gender, job role, and education.
- Identify high-risk categories with elevated attrition through correlation and trend analysis.
- Assess satisfaction scores across departments and job roles to uncover areas requiring HR intervention.
- Examine productivity and performance trends by gender, age, and experience level.
- Develop high-performer demographic profiles to enhance talent acquisition and recruitment strategies.
- Deliver data-driven recommendations for improving employee engagement, retention, compensation, and organizational culture.
- Establish a foundational HR analytics framework for ongoing workforce insights.

Methodology Overview:

- Aggregated and analyzed employee counts, attrition numbers, and attrition rates by department.
- Explored attrition trends across age groups, highlighting vulnerable segments.
- Conducted a gender-based attrition breakdown within age groups to detect disparities.
- Evaluated job satisfaction by role to spotlight dissatisfaction trends.
- Analyzed educational backgrounds of exiting employees to assess field-wise attrition.

Key Insights:

- Overall attrition rate stands at 16.12%. The R&D department reports the highest attrition (56.12%), followed by Sales (38.82%), while HR has the lowest (5.06%). This signals underlying challenges within R&D needing further exploration.

- Employees aged 25-34 exhibit the highest turnover (52.63%), followed by those under 25 (47.37%), indicating a need for targeted engagement of younger talent.
- Female attrition is significantly higher than male counterparts in key age brackets:
    - 25-34 years: 61.61% (females) vs. 38.39% (males)
    - 35-44 years: 72% (females) vs. 27.45% (males)
- This highlights a potential need for improved gender inclusivity and work-life policies.
- Sales Executives and Research Scientists reported the lowest satisfaction levels (2.0 and 2.2 out of 5, respectively), while Manufacturing Directors scored the highest at 3.8.
- Employees with Life Sciences and Medical education backgrounds had the highest number of exits (89 and 63, respectively), whereas technical degrees saw comparatively lower attrition.

Recommendations:

- Conduct focused exit interviews and pulse surveys in R&D to understand root causes; consider restructuring roles and promoting work-life balance.
- Develop tailored growth and mentorship initiatives for younger employees, leveraging digital platforms and AI mentorship tools.
- Introduce gender equity programs, flexible schedules, remote work options, and return-to-work policies to support female employees.
- Enhance compensation, work culture, and job enrichment in Sales and R&D through strategic training, performance incentives, and technology enablement.
- Strengthen ties with Life Sciences institutions through scholarship programs, internships, and defined career pathways to attract and retain top talent.

Outcome:

This analysis serves as the foundation for a dynamic HR analytics framework capable of delivering continuous workforce insights. The Power BI dashboard created for this project allows HR teams to monitor, visualize, and act on key metrics in real-time.