HR Attrition Analytics – Comprehensive Project Report

1. Introduction

Thisreport provides a detailed overview of the HR Attrition Analytics project developed by Abhinav Dahayat. The objective of this project was to understand the reasons behind employee attrition and create data-driven insights to help HR departments improve retention rates. The project utilized SQL, Power BI, and Excel to extract, clean, and visualize data.

2. Total Questions Solved

Atotal of 10 SQL questions and10 Power BI dashboards were created for this project. Each question and dashboard contributed to understanding different aspects of employee attrition, such as salary, job satisfaction, work-life balance, and departmental performance.

No.	SQL Query Topic
1 2	Overall Attrition Rate Analysis
3 4	Attrition by Department
5 6	Attrition by Job Role
7 8	Attrition by Gender
9	Attrition by Marital Status
10	Attrition by Education Field
	Attrition by Salary Quartile
	Attrition by Work-Life Balance
	Attrition by Total Working Years
	Attrition Risk Segmentation

3. Power BI Dashboards Created

FourPower BI dashboardswere developedto make insights visually appealing and interactive for managers and HR leaders.

Dashboard Page	Focus Area
Page 1 Page 2	Executive Summary – Overall Attrition Overview
Page 3 Page 4	Attrition by Department and Education
	Attrition by Job Role and Work Factors
	Attrition by Salary and Tenure

4. Problems and Challenges Faced

While creating the HRAttritionproject, several challenges were encountered. These include technical issues with SQL imports, data consistency, visualization design, and performance optimization. Below is a list of key issues and their resolutions.

No.	Challenge	Solution
1	SQL Import Errors	Faced 'LOCAL INFILE disabled' error when importing data. Resolved by enab

2	Column Mismatch	Missing 'EmployeeID' field caused SQL view creation errors. Solved by replac
3	Power BI Data Refresh Issues	Large CSV files slowed refresh rate. Fixed by cleaning data and enabling incr
4	Attrition % Calculation	Used formula: (Employees Left / Total Employees) * 100 in DAX to calculate a
5	Color Consistency	Adopted professional theme using Blue (#2563EB), Orange (#E76F51), and L

5. Conclusion

TheHR AttritionAnalytics project demonstrates the power of combining SQL analysis, Power BI visualization, and data storytelling. Through this project, Abhinav successfully identified patterns influencing employee attrition and provided data-backed solutions to enhance HR decision-making. Future improvements will include machine learning-based attrition prediction and real-time dashboard updates.

Prepared by: Abhinav Dahayat

Role:DataAnalyst | Tools:PowerBI, SQL, Python, Excel

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