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| HR Attrition Insights |  |
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|  | Diya Shah |

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|  | INTRODUCTION Employee attrition is a critical concern for HR departments, as high turnover impacts productivity and organizational growth. This project aims to uncover the factors influencing attrition, visualize key patterns, and help HR make informed retention decisions. ABSTRACT This project focuses on analyzing employee attrition data using Python, Excel, and Power BI. We perform data cleaning, exploratory analysis, and visualization to uncover attrition trends based on department, gender, education field, and job role. The final deliverable is a dynamic Power BI dashboard with filters, KPIs, and drill-down insights to support HR decision-making. | |  |
|  | TOOLS & TECHNOLOGIES USED  * **Python (Pandas, Matplotlib, Seaborn)** – Data preprocessing & EDA. * **Microsoft Excel** – Preliminary data inspection and formatting. * **Power BI** – Interactive dashboard * and advanced data visualizations.  Dataset Overview  * **Source**: HR Analytics Dataset (public Kaggle dataset or internal HR dump) * **Size**: ~1,470 records * **Fields**: Employee ID, Age, Gender, Department, Job Role, Monthly Income, Education, Attrition (Yes/No), etc. |  |  |

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|  | STEPS INVOLVED IN BUILDING THE PROJECT **Data Collection & Cleaning (Python + Excel):**   * Handled missing values, encoded categorical variables.   **EDA (Python):**   * Correlation matrix, attrition vs. income, department-wise analysis. * Insights: High attrition in Sales and Human Resources; strong correlation with overtime and job role.   **Data Modelling & Metrics (Power BI):**   * Created key measures: Attrition Rate, Total Employees, Active Employees.   **Dashboard Design (Power BI):**   * Slicers for filtering by department, gender, job role. * KPI tiles and visual storytelling with interactive charts. * Navigation buttons for multi-page insights. | KEY VISUALS IN POWER BI DASHBOARD  * **Attrition Trend Over Time (Line Chart)** * **Department-wise Attrition (Donut Chart)** * **Gender vs. Attrition (Stacked Bar Chart)** * **KPI Tiles**: Attrition Rate, Total Attrition, Active Employees  CONCLUSION This HR Analytics project demonstrates how data-driven storytelling can empower HR teams to identify attrition patterns and take preventive action. With an interactive Power BI dashboard, decision-makers can slice data by various dimensions to make targeted retention strategies. |  |
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| An organization's greatest strength is not in never facing attrition, but in understanding and improving every time it happens. -HR Insights |
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