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Data Management alex

Analysing Employee Attrition

Using Power BI

Analyzing Employee Attrition at ABC Corporation using Power BI

# Background

ABC Corporation, a multinational company, is facing challenges with employee attrition. To understand the factors contributing to this issue and develop strategies for retention and talent management, they implemented a Power BI project to analyze their employee data comprehensively.

**Project Objectives**

1. **Identify Key Drivers of Attrition:** Determine the primary factors influencing employee decisions to leave the company.
2. **Segmentation Analysis:** Analyze attrition rates across different employee segments to identify high-risk groups. These segments could include departments, job roles, genders, education levels, etc.
3. **Dashboard and Reporting:** Design an interactive dashboard to present insights and recommendations effectively to stakeholders.

**Data Sources**

* **Database:** Three database tables provided:
  + Employee\_survey: Responses from employees regarding satisfaction, work-life balance, etc.
  + Manager\_survey: Responses from managers regarding employee performance, etc.
  + EmployeeInfo: Demographic information, job role, etc.
* **IN/OUT Times:** Two spreadsheets extracted from the Clock-In-Machine for the year 2015, containing employee in/out times.

**Methodology**

1. **Data Collection:** Import data from various sources, including the database and CSV files.
2. **Data Preparation:** Reshape data for analysis through pivoting, aggregating, or filtering.
3. **Data Model:** Build a dimensional model to integrate all data sources and facilitate reporting.
4. **Visualization and Dashboarding:** Create an interactive dashboard using Power BI to communicate findings effectively.

# Home

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# Departments

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# Employees

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# Surveys

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# Attendence

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# Findings and Insights

The Power BI dashboard consists of five pages, each focusing on a specific aspect of employee attrition:

* **Department Attrition Analysis:** This page identifies Sales (38.3%) as the department with the highest attrition rate, while Research and Development has the lowest (6.38%).
* **Employee Attrition Analysis:** This page explores attrition rates across various employee segments. Key findings include:
  + Highest attrition rate for employees with tenure between 2 and 5 years (36.43%).
  + Slightly higher attrition rate for men (31.47%) compared to women (30.77%).
  + Highest attrition rate among younger employees (under 30 years old) at 35.21%.
  + Employees with a Humanities degree have the highest attrition rate (42.31%).
  + Employees who travel frequently for business have a lower attrition rate (23.08%) than those who travel rarely (33.73%).
* **Survey Analysis:** This page analyzes the relationship between employee responses to a survey question and attrition rates. Unfortunately, the specific question and answer choices are not available in the provided image. However, the general trend shows a higher attrition rate for less positive responses.
* **Attendance Analysis:** This page displays the Average Worked Hours per Month and the Sum of Overtime Hours per Month. The average worked hours remain consistent throughout the year, while the overtime hours are consistently negative, suggesting less overtime work than expected.

**Key Takeaways and Recommendations**

The analysis revealed several factors potentially contributing to employee attrition at ABC Corporation:

* **Lack of Advancement Opportunities:** The high attrition rate among employees with 2-5 years of tenure suggests a potential dissatisfaction with career progression opportunities.
* **Work-Life Balance Challenges:** Younger employees and those who travel frequently may require additional support to achieve a healthy work-life balance.
* **Job Dissatisfaction:** The link between negative survey responses and attrition suggests areas requiring improvement to enhance employee satisfaction.

Based on these findings, here are some recommendations for ABC Corporation:

* **Invest in Career Development Programs:** Provide clear paths for advancement and opportunities for skill development to retain employees during their mid-career years.
* **Implement Work-Life Balance Initiatives:** Offer flexible work arrangements, well-being programs, and address concerns specific to younger employees and frequent travelers.
* **Conduct Stay Interviews:** Regularly talk to high-performing employees to understand their concerns and prevent potential departures.
* **Analyze Survey Responses in Detail:** Identify specific areas from the employee survey that are linked to attrition and develop targeted action plans to address them.

**Conclusion**

The Power BI dashboard provides valuable insights into employee attrition at ABC Corporation. By focusing on the identified factors and implementing the suggested recommendations, ABC Corporation can develop effective retention strategies to improve employee satisfaction and reduce turnover.