

HR Analytics - Boosting Retention with Data Insights at Adecco India

Background:

Adecco India is a medium-sized technology company specializing in software development. It has a diverse workforce spread across various departments, including engineering, marketing, sales, and customer support. Recently, Adecco India has observed an increase in employee turnover, especially among junior-level employees, which is concerning for the management. The company is committed to understanding the factors influencing employee attrition and job satisfaction to develop strategies for improving employee engagement and retention.

Scenario:

Adecco India is facing a high attrition rate, particularly in the sales department among junior-level employees. The management is worried about the potential impact on productivity and the costs associated with hiring and training new employees. As a data analyst, you are tasked with analyzing the HR data to uncover insights that can help in reducing the attrition rate. Your analysis will inform strategic decisions aimed at enhancing employee satisfaction and retention.

Problem Statement:

Adecco India is experiencing high employee turnover, particularly in the sales department among junior-level employees. This turnover is costly and disrupts team dynamics, leading to decreased productivity and morale.

Solution:

Data analysis : *Gather and analyze employee data such as employee count, attrition rate, department ,etc ,,to analyze data.*

Stakeholders engagement: *Involves Internal holders such as sales department,human resource department,etc and also External holders such as Training providers.*

Data-driven Insights: *Leverage insights from data to identify specific factors contributing to turnover in the sales department.*

Stakeholders:

Types of Stakeholders:

- Internal Stakeholders:
 - HR Department
 - Sales Department
 - Engineering Department
 - Marketing Department
 - Customer Support Department
 - Senior Management
- External Stakeholders:
 - Recruitment Agencies
 - Training Providers

Key performance Indicator(KPI):

- **KPI 1:** Total Attrition Rate : 237
- **KPI 2:** Average Monthly Income: 6502.9
- **KPI 3:** Average Number of years in company: 7.003
- **KPI 4:** Average Job Satisfaction Score: 2.79

Goal:

To analyze Adecco India's HR data to identify the factors contributing to high attrition rates, particularly among junior-level sales employees. The analysis aims to uncover key insights that will inform strategies for improving employee satisfaction and retention, thereby minimizing the costs and productivity impacts associated with high turnover.

Methodology:

1. **Data Sources:** SQL, Data Scraping, Local Data Sources , AWS.
2. **Data Wrangling:** Data Cleaning ,Data Manipulation, Data Joining ,Data Merging,Data Understanding.
3. **Data Analysis:** Identifying Patterns and Trends for analysis.

Data Dictionary:

Column	Description
Age	Age of the employee
Attrition	Whether the employee has left the company (Yes/No)
BusinessTravel	Frequency of business travel
DailyRate	Daily salary rate of the employee
Department	Department in which the employee works
DistanceFromHome	Distance of the employee's home from the workplace
Education	Education level of the employee (1-5 scale)
EducationField	Field of education
EmployeeCount	Always 1 (as the data is individual-specific)
EmployeeNumber	Unique identifier for each employee
EnvironmentSatisfaction	Employee's satisfaction with the work environment (1-4 scale)
Gender	Gender of the employee
HourlyRate	Hourly salary rate of the employee
JobInvolvement	Employee's involvement in their job (1-4 scale)
JobLevel	Job level of the employee (1-5 scale)
JobRole	Role of the employee within the company

JobSatisfaction	Employee's satisfaction with their job (1-4 scale)
MaritalStatus	Marital status of the employee
MonthlyIncome	Monthly salary of the employee
MonthlyRate	Monthly rate of the employee
NumCompaniesWorked	Number of companies the employee has worked for
Over18	Whether the employee is over 18 years old
OverTime	Whether the employee works overtime (Yes/No)
PercentSalaryHike	Percentage increase in salary
PerformanceRating	Performance rating of the employee (1-4 scale)
RelationshipSatisfaction	Employee's satisfaction with relationships at work (1-4 scale)
StandardHours	Standard working hours (80 for all employees)
StockOptionLevel	Stock option level of the employee (0-3 scale)
TotalWorkingYears	Total number of years the employee has worked
TrainingTimesLastYear	Number of training sessions attended by the employee last year
WorkLifeBalance	Employee's work-life balance (1-4 scale)
YearsAtCompany	Number of years the employee has been with the company
YearsInCurrentRole	Number of years the employee has been in their current role
YearsSinceLastPromotion	Number of years since the employee's last promotion

YearsWithCurrManager	Number of years the employee has been with their current manager
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Recommended Analysis:

1. What is the overall attrition rate at Adecco India?

16.123 is the overall attrition rate at adecco india.

2. Which department has the highest attrition rate?

Research and Development department 133(56.12%) has the highest attrition rate as compared to Human Resource department 12(5.06%).

3. What is the average age of employees who have left the company?

33.61 is the average age of employees who have left the company.

4. How does job satisfaction vary across different job roles?

Job role names as Health Representative (2.79) have the highest job satisfaction score as compared to human resource role(2.56) which has least job satisfaction score.

5. Is there a significant difference in attrition rates between male and female employees?

Yes, there is a significant difference in attrition rate as the male 882(60%) has the highest attrition rate as compared to female 588(40%).

6. What is the average monthly income of employees who have left the company?

4787.09 (73.61%) is the average monthly income of employees who has left the company.

7. What is the distribution of performance ratings among employees?

The distribution of performance rating among employees is 3 (1244) and 4 (226).

8. How many employees work overtime regularly?

Over 416(28.30%) employees work overtime regularly as compared to non-worker 105 (71.70%).

9.What is the average number of years employees have worked at Adecco India?

5.131 (73.21%) is the average number of years that employees have worked in adecco india.

Conclusion:

The analysis reveals that Adecco India faces a significant attrition challenge, with an overall rate of 16.12%. The Research and Development department experiences the highest attrition (56.12%), while Human Resources has the lowest (5.06%). Key factors influencing attrition include low job satisfaction, particularly in the HR role, gender disparities (higher attrition among males), and lower income levels. The average attrition age is 33.61, with employees working overtime and those with a performance rating of 3 being more likely to leave. Addressing these issues with targeted interventions will be critical to improving retention and overall productivity.

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Dataset:

Adecco

