



HR ANALYTICS - PREDICT EMPLOYEE ATTRITION



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EXECUTIVE SUMMARY

Attrition, which represents the turnover of employees across all departments and levels of an organization, has several downsides and negative impacts

- These effects can be significant and wide-ranging, affecting the company's performance and its ability to achieve its strategic objectives
- Some of the key disadvantages of having a high attrition rate in a company include the cost of recruitment and onboarding, loss of knowledge and expertise, productivity disruption, decreased team cohesion, impact on customer relationships, delayed project and goals, amongst many others

Predictive analytics allows HR to take the best decisions that reduce attrition rate

- Make decisions based on statistical data rather than speculation to address real turnover drivers
- Identify systemic issues affecting engagement and attrition, facilitating company wide adjustments rather than individual-level changes

To address this issue in your company, a predictive analytics model was developed to identify potential employee attrition

- The Random Forest model emerged as the most effective, balancing accuracy and interpretability
- The confusion matrix shows a significant number of true positives and true negatives, with very few false positives and false negatives, reflecting the model's reliability
- The most important features resulted in the model are monthly income, overtime, age and years at the company

Regarding the predictive model, who is really leaving your Company?

- Younger employees are more likely to leave the company than others
- Single employees are more likely to quit their jobs in comparison to married or divorced employees, boasting an attrition rate of 25%, while married and divorced employees boast 12% and 10%, respectively
- Sales representatives have the highest attrition rate, followed by Laboratory Technicians, Human Resources (23%) and Sales Executives (17%) All of these well above your average attrition rate of 10%
- Employees who work overtime have a higher attrition rate (31) in comparison to those who don't work overtime (10%)
- The employees who leave the company have a significantly lower monthly income than those who don't leave
- Employees who live closer to their work places are less likely to quit their jobs Employees who travel the most for work, also have higher attrition levels
- New employees are more likely to quit their jobs, when comparing to employees that have been working in the company for more than a couple of years. This trend is particularly steeper in the first 2 years working in the company

Therefore, we suggest three strategic priorities to reduce attrition rate

- For employee profile, it is important to implement mentorship and career development programs, promote a culture of ongoing learning provide career advancement opportunities to retain experienced workers and act preventively before they reach the average age of leaving conducting regular satisfaction surveys
- Regarding monthly income feature recommend salaries according to the industry benchmark improve incentives and bonuses, implement career planning and salary revision, as well as retirement savings account
- Regarding the work life balance, it is important to implement flexible work hours and support effective remote work, hire additional staff and redistribute workloads among employees, establish a predetermined high rate of pay for overtime work, provide transportation assistance and create new satellite offices near employee housing clusters



THREE STRATEGIC PRIORITIES TO REDUCE ATTRITION RATE

1. EMPLOYEE PROFILE

2. MONTHLY INCOME

3. WORK LIFE BALANCE



INTEGRATING PREDICTIVE ATTRITION MODEL INTO HR DASHBOARD

Empower HR with actionable insights to proactively address potential employee attrition:

Real-Time Monitoring: Track and monitor employees predicted at risk of attrition.

Prioritization: Focus on high-risk individuals for retention interventions. **Trends & Analysis:** Visualize attrition patterns over time to inform strategic HR decisions. **Custom Alerts:** Set notifications for flagged employees to take timely action.

THANK
YOU

