

SOURCE STUDY TITLE AND AUTHOR

How Data Science is Revolutionizing Human Resources Analytics, HR Analytics Trends, 2024

SUMMARY

Data Science: Transforming HR Like Never Before

DESCRIPTION

In a fast-changing world that is increasingly data-centric, data science has become a critical tool in Human Resources (HR) management. People analytics is the use of advanced data science to connect HR objectives with business goals. People analytics aids leaders in understanding business and workforce trends, enhancing decision-making, and boosting employee engagement.

An increasingly powerful capability of an effective people analytics approach is predictive analytics. Key applications of predictive analytics in HR include workforce planning, improving employee experience and performance, optimizing workforce allocation, enhancing talent development programs, and increasing employee retention. Additionally, predictive analytics as part of a people analytics approach has proven useful in designing personalized development plans for employees.

KEY FINDINGS

The research combines a literature review on the evolving data science trends in people analytics with specific case studies on applications and outcomes. Key findings include:

- **Employee productivity:** companies utilizing people analytics that includes predictive analytics report a 30% boost in productivity.
- **Happier employees:** organizations employing people analytics experienced a 7-10% improvement in employee performance metrics, 21% increase in employee performance,



and over 35% to 65% reduction in voluntary turnover rates. A Deloitte report further found that companies using people analytics are 4.3 times more likely to retain employees compared to those that don't. A survey by SAP revealed that companies using machine learning within HR functionalities saw a 17% decrease in employee absenteeism.

- **Improved HR investments:** 89% of companies using predictive analytics for workforce management and planning reported better returns on their HR investments. For example, Google uses predictive analytics to optimize its hiring process and predict employee attrition, enabling the company to implement strategies that retain key talent.
- **Increased Profitability:** A University of California study found that people analytics offered a transformative approach to HR, generating powerful insights into employee behavior and future workforce needs with the potential to increase company profits by up to 22%.
- **Warnings on AI and ML bias:** Experts recommend developing a company-wide machine learning (ML) and artificial intelligence (AI) policy informed by specialized legal counsel prior to utilizing these tools, especially for the purposes of people analytics. Experts additionally recommend combining a data-driven analytical approach to HR and organizational management with human judgement to ensure critical qualitative data and humane considerations are not overlooked.

Case study insights:

- Microsoft developed a machine learning model to improve its talent management, which enabled the organization to better identify skill gaps and predict future trends in workforce needs. This approach led to a reported 20% improvement in talent management effectiveness.
- Infosys, one of India's leading IT companies, uses people analytics to better understand employee performance, training needs, and career progression. This data-driven approach lowered attrition rates at the company by 15% within two years.
- Deloitte uses people analytics to predict employee turnover, which enabled implementation of more effective employee engagement and retention strategies resulting in a 20% improvement in voluntary turnover.

[SOURCE STUDY LINK](#)

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