

Chapter 10

Machine Learning for Smarter Recruitment and Talent Acquisition: Smarter Recruitment and Acquisition

C. Karthikeyan

 <https://orcid.org/0000-0002-2018-8245>

SJB Institute of Technology, Vishwesarya Technological University, Belgav, India

ABSTRACT

Machine Learning (ML) has revolutionized talent management within Indian corporates by transforming recruitment, retention, and development processes. This chapter delves into the applications of ML in these areas, showcasing how companies leverage sophisticated algorithms to enhance decision-making, streamline workflows, and foster a more efficient and engaged workforce. Examples from Indian corporates such as Zebra Medical Vision, Tata Consultancy Services (TCS), Infosys, and HCL Technologies illustrate the significant impact of ML on hiring efficiency, employee retention, and development initiatives. The chapter highlights the potential for further advancements in talent management through ML, paving the way for a dynamic and successful business environment.

INTRODUCTION

Machine Learning (ML) has become a transformative force in various domains, and talent management in Indian corporates is no exception. By leveraging ML technologies, companies can enhance their recruitment processes, improve employee

DOI: 10.4018/979-8-3693-8442-8.ch010

retention, and facilitate development programs, leading to a more effective and efficient workforce. This Chapter explores how ML is utilized in these three crucial areas of talent management, with examples from Indian corporates to illustrate its impact and relevance. Machine Learning has significantly impacted talent management in Indian corporates, offering innovative solutions for recruitment, retention, and development. By automating and enhancing these processes, ML enables companies to make data-driven decisions, improve efficiency, and foster a more engaged and capable workforce. As Indian corporates continue to embrace ML technologies, the potential for further advancements in talent management is immense, paving the way for a more dynamic and successful business environment. Machine Learning (ML) has emerged as a powerful tool in talent management, fundamentally transforming the way Indian corporates approach recruitment, retention, and development. By leveraging sophisticated algorithms and data analysis, companies can streamline processes, enhance decision-making, and foster a more efficient and engaged workforce. This chapters traverse through how ML is applied in these areas within Indian corporates, supported by statistical evidence and real-world examples.

Recruitment

The recruitment process, traditionally characterized by manual resume screening and extensive interviewing, has seen significant advancements through ML integration. ML algorithms enable the automation of candidate screening, thereby reducing human error and improving the efficiency of hiring practices. Zebra Medical Vision, a health tech firm, exemplifies the use of ML in recruitment. The company employs algorithms to analyze job descriptions and candidate profiles, achieving a more precise match between job requirements and candidates' skills. This approach has accelerated the recruitment process by 30% and improved hire quality, with a 25% increase in the alignment of new hires to job roles (Kumar, 2023). The algorithmic approach not only speeds up the process but also ensures that the candidates' skills and experiences align closely with the job requirements. Tata Consultancy Services (TCS) also harnesses ML to enhance recruitment strategies. TCS utilizes predictive analytics to identify high-performing candidates by analyzing historical data and performance patterns. This method has led to a 20% reduction in time-to-hire and a 15% increase in the retention rate of new hires, reflecting an improved overall fit between employees and their roles (Singh, 2022). By leveraging historical data, TCS effectively predicts candidate success, which streamlines the hiring process and reduces turnover.

24 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/machine-learning-for-smarter-recruitment-and-talent-acquisition/364232

Related Content

Facilitating Decision Making and Maintenance for Power Systems Operators through the Use of Agents and Distributed Embedded Systems

A. Carrasco, M. C. Romero-Ternero, F. Sivianes, M. D. Hernández, D. I. Oviedo and J. Escudero (2010). *International Journal of Intelligent Information Technologies* (pp. 1-16).

www.irma-international.org/article/facilitating-decision-making-maintenance-power/46960

Visualising Inconsistency and Incompleteness in RDF Gene Expression Data using FCA

Honour Chika Nwagwu (2014). *International Journal of Conceptual Structures and Smart Applications* (pp. 68-82).

www.irma-international.org/article/visualising-inconsistency-and-incompleteness-in-rdf-gene-expression-data-using-fca/120235

Design and Usage of a Process-Centric Collaboration Methodology for Virtual Organizations in Hybrid Environments

Thorsten J. Dollmann, Peter Loos, Michael Fellmann, Oliver Thomas, Andreas Hoheisel, Peter Katranuschkov and Raimar Scherer (2011). *International Journal of Intelligent Information Technologies* (pp. 45-64).

www.irma-international.org/article/design-usage-process-centric-collaboration/50485

Sustainable Outsourcing in an AI-Driven World: Ethical, Economic, and Environmental Perspectives

Mohan Kumar, Pooja Rani, Namita Mangla, Nhat Tan Nguyen and Kulpreet Kaur (2025). *Global Work Arrangements and Outsourcing in the Age of AI* (pp. 1-24).

www.irma-international.org/chapter/sustainable-outsourcing-in-an-ai-driven-world/378533

Generative AI and the Future of Cyber Threats: Building Resilient, Trustworthy Defenses

C. Nandan and Pinnika Syam Yadav (2026). *The Rise of Explainable and Generative AI-Driven Cyber and Information Security* (pp. 149-186).

www.irma-international.org/chapter/generative-ai-and-the-future-of-cyber-threats/409879