

as they strive to stay ahead of the competition. Predictive analytics, which makes predictions about the future using data-driven techniques, is revolutionizing these HR procedures by providing us with more useful, impartial, and usable data. In the past, judging an employee's work was done by hand and was subjective. It was usually based on yearly reviews, self-evaluations, and comments from the boss [1]. These methods can grant you valuable data almost how well a worker is doing their work, but they do not always appear all of their efforts or potential. This could make choices less clear, cause predispositions, and make things less reliable. As an answer, prescient analytics employs past execution information, behavioral designs, and even outside components like advertise patterns to create appraisals of an employee's past, show, and future execution that are based on information. Utilizing calculations and machine learning models on these data points, companies can guess how well an worker will do within the future, find places where they can move forward, and make development plans that fit those needs. In the same way, progression planning an critical prepare for making sure that key positions and authority roles remain filled has customarily depended on subjective assessments of conceivable pioneers, which were influenced by things like length of benefit, rank, and individual connections. This wills cruel that pioneers miss out on chances to develop and can take off groups open to assault amid times of alter [2]. This issue can be solved with prescient analytics, which figures out which laborers will do well in higher-level employments by looking at their skills, experiences, identity characteristics, and past work. Companies can deliberately find high-potential labourers, deliver them centered development chances, and make beyond any doubt they have a solid pool of pioneers prepared to step into key parts when required by utilizing forecast models. Utilizing expectation analytics to both assess execution and arrange for who will take over after someone leaves has a number of imperative benefits. To begin with, it makes things more objective by getting freed of the blemishes that come with standard survey strategies. For example, specialists who are more discernible or who have way better individual connections with top pioneers are more likely to be advanced [3]. Prescient models use information to deliver a more complete and reasonable picture of how well representatives are doing, making sure that each individual is evaluated based on what they really do and what they seem do. The moment way prescient analytics makes HR forms more productive is by mechanizing information collection, investigation, and reporting. This lets HR specialists make strategic decisions rather than doing authoritative work. Predictive analytics can moreover offer assistance businesses discover and settle possible gaps in their workforce administration. For example, companies can find workers who aren't doing their jobs well early on and help them improve by predicting how their performance will change in the future. On the other hand, the analytics can also help companies find employees who have the qualities or habits that make them good leaders [4].

LITERATURE REVIEW

The application of data analytics to human resources (HR) management has significantly increased during the last ten years. This is a result of businesses realizing the value of using data to inform their decisions. Subjective tests, frequent evaluations, and informal notes have all been used in the past to evaluate an employee's work and make plans for their replacement. However, these methods can be prejudiced and inaccurate. Performance was frequently evaluated based on the skewed judgments of supervisors. Unconscious prejudice, communication styles, and interpersonal interactions are a few examples of the factors that may influence these judgments. Similarly, succession planning was frequently predicated on rank or intuition, meaning that intelligent

employees who could have been [5]. These methods made it easier for HR teams to get more accurate and thorough information about what employees did how they behaved, and how far they were along in reaching their goals. As HR technologies got better, predictive analytics became more important. This is an area that uses statistical models, machine learning algorithms, and data mining to guess what will happen in the future based on what has happened in the past. This huge amount of data about employees is used by predictive analytics in HR to guess how a person will do in the future, which helps companies move beyond biased evaluations [6]. A lot of different types of data can be used in predictive models, such as past performance data, feedback from peers and managers, participation polls, skill tests, and even data from the outside market. Predictive analytics can give a more complete, accurate, and unbiased picture of an employee's potential and success by combining these different types of data. Predictive analytics have also helped succession planning, which used to depend on people's own opinions about who would be the best boss [7]. By identifying patterns in their abilities, routines, and career path, predictive models can identify high-potential employees that may have been obscured by conventional approaches. Businesses can better prepare for leadership changes with this data-driven approach, [8]. which ensures that they always have capable individuals on hand to take over and fill important positions when needed.

Table 1: Leadership change approach

Key Finding	Approach	Challenges
Labor turnover rate decreases as a result of proactive interventions.	Leveraged historical data to predict turnover and retention	Ensuring data privacy and security
Data integration leads to improved decision making.	Implemented regression analysis to predict performance outcomes	Resistance to data-driven decisions in HR
Leadership Development Enhances Predictive Analytics	Used clustering algorithms to identify future leaders	Difficulty in accurately predicting leadership success
Early identification by improving employee retention	Used machine learning models to analyze performance trends	Data quality and completeness issues
Better alignment of talent with organizational goals	Applied predictive analytics to map talent gaps	Lack of diversity in training datasets
Predictive analytics can identify high performers early	Used historical performance data to create early identification models	Complexity in integrating multiple data sources
Predictive models improve performance accuracy	Analyzed engagement surveys to predict turnover risk	Over-reliance on data, neglecting human judgment
Data-driven decisions reduce biases in evaluations	Integrated HR software with performance data for decision-making	Ensuring fairness across diverse employee groups
Performance forecasting leads to more accurate goal setting	Forecasted performance using past performance and goal data	Ensuring models stay relevant over time as workforce dynamics change
Improved succession planning through future potential prediction	Used predictive models to evaluate leadership potential	Potential for algorithmic bias in leadership prediction

Employee engagement is better predicted with data analysis	Integrated employee feedback and behavior data to predict engagement	Challenges in predicting long-term employee engagement
Predictive models offer personalized development plans	Generated tailored development plans based on data-driven insights	Difficulty in obtaining accurate career development data
Better career development planning with predictive insights	Used predictive models to align career goals with performance data	Data inconsistencies leading to inaccurate forecasts

UNDERSTANDING PREDICTIVE ANALYTICS

1.1 Definition of predictive analytics

Predictive analytics is a subset of data analytics that uses historical data, statistical analysis, and machine learning to identify patterns and make educated guesses about the future. Predictive analytics' primary objective is to make educated guesses about potential outcomes or human behavior so that companies can take informed decisions before they happen. This type of analysis goes beyond descriptive analytics, [9]. which merely summarizes historical data, and diagnostic analytics, which explains what, happened. Predictive analytics instead attempts to make educated guesses about what is likely to occur in the future. This aids companies in preparing for issues, opportunities, or trends. Two main things are needed for predictive analytics to work: past data and statistical models. Predictive models can find connections and links that aren't obvious at first glance by looking at past events, actions, or trends. [10]. Machine learning algorithms make predictions even more accurate over time by learning from new data all the time and making changes to the model to make it more accurate. Regression analysis, decision trees, time series analysis, and neural networks are all common methods used in prediction analytics [11]. A lot of different fields use predictive analytics, such as healthcare, banking, marketing, and human resources.

1.2 Key techniques and tools used in predictive analytics

When it comes to spotting trends, formulating forecasts, and generating original concepts, each has advantages. Machine learning (ML) is one of forecast analytics' most helpful tools. Formulas that allow computers to learn from data and improve their guesses over time without being instructed to do so are used to accomplish this. When it comes to handling large datasets with intricate, non-linear relationships, machine learning models excel. Two common types of machine learning are supervised learning and unsupervised learning. Supervised learning trains models on labeled data (for example, regression and classification), while unsupervised learning looks for hidden patterns in data that hasn't been labeled (grouping and association). Neural networks are a type of machine learning that is based on the structure of the human brain [12]. They have become very famous because they can handle large amounts of complex, unstructured data, like text and pictures, in jobs like natural language processing and image recognition. Another important part of predictive analytics is statistical modeling. Utilizing statistics methods to describe and examine connections between factors is what it means. Most of the time, regression analysis is used to predict a dependent variable based on one or more independent factors. Linear regression, for instance, can guess sales

based on how much money is spent on ads. Another important statistics method is time series analysis, which looks at data points that were taken or recorded at certain times.

1.3 Applications of predictive analytics across industries

Predictive analytics is used in many fields to help companies make choices based on data, improve processes, and guess what trends will happen in the future. Because it can predict what will happen based on past data, it is a useful tool for increasing productivity, lowering risks, and finding new possibilities. Predictive analytics is used in healthcare to improve care for patients and make operations run more smoothly [13]. By looking at patient data, healthcare professionals can guess when diseases will spread, how many patients will be admitted, and how likely it is that patients will need to be readmitted. This helps them plan their resources and make personalized treatment plans.

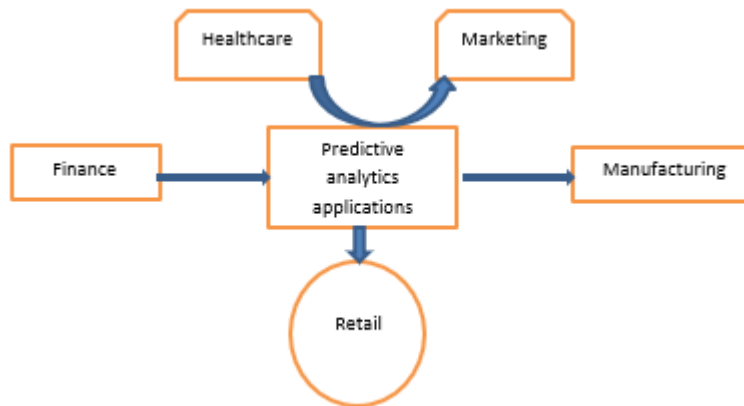


Figure 1: Predictive analytics applications across various industries

Predictive models can also guess how a patient's health will turn out, which can help with long-term problems or finding high-risk patients who may need instant care. Predictive analytics is also used in drug research and clinical studies to find good candidates and make the best use of study designs. Predictive analytics is very important in finance for managing risks, finding scams, and figuring out how customers will act. Financial companies figure out the credit risk of a customer by looking at past transaction data and guessing how likely it is that the customer will not pay their debts on time. Users can also use predictive analytics to find scams by looking for trends in transaction data that don't follow the rules. Banks and investment companies also use prediction models to guess what will happen in the market, make stock management better, and make sure that each customer gets the right financial goods for their needs. Predictive analytics are used in marketing to help target and personalize customers better. Businesses can guess what customers will buy in the future, make marketing efforts more personal, and find the best prices by looking at past purchases, customer behavior, and demographic information. Predictive analytics also helps businesses figure out why customers leave, find their most valuable customers, and come up with ways to keep them [14]. This helps businesses make better use of their marketing resources and makes customers happier. Predictive analytics is used in industry to improve timing of output, managing the supply chain, and keeping tools in good shape.

METHODOLOGY

1.4 Research Design

A strategy or framework that outlines the procedures, techniques, and methodologies that will be employed to conduct a research study is known as a research design. Because it provides a systematic method for collecting, analyzing, and interpreting data, it is a crucial step in the research process. This guarantees that the study is precise, trustworthy, and aimed at answering the research objectives. A well-designed study produces dependable and practical results by minimizing biases and errors. Different research problems and objectives are best addressed by different kinds of research methods. By summarizing characteristics or occurrences, a descriptive study plan allows you to quickly assess the existing state of affairs [15]. This fashion is frequently employed when the objective is to make a subject easy to understand when there is a lack of understanding about it. When there is little information available, exploratory research attempts to learn more about a research problem. Usually, qualitative techniques like focus groups and chats are used to do this. It might assist you in identifying trends or generating concepts for further study. Changing one or more variables and observing the effects on other variables is known as an experimental study design. In labs and other controlled environments, this method is frequently employed to help researchers identify causal relationships. Despite not using random assignment, this approach is comparable to the experimental design. It becomes less stiff as a result, although It is still applicable in everyday life. A correlational study method examines the relationship between two or more variables without altering them. This approach can assist you in identifying patterns and relationships, but it cannot demonstrate a causal relationship.

1.5 Data Collection

1.6 Description of data sources

Good data collection is crucial for predictive analytics since the accuracy and dependability of the estimations are directly impacted by the quality of the data. Various forms of data are utilized to obtain comprehensive and practical information on employees' activities, performance, and potential while assessing their work and making plans to replace them. These data sources typically originate from a variety of sources, including HR systems, job reviews, and employee surveys. One of the primary sources of information for prediction analytics for HR managers is Organizational Performance Records. These documents typically include metrics like as employee productivity, sales volume, target attainment, and performance review scores. Numbers from performance records can be utilized to determine patterns in an employee's accomplishments or potential areas for improvement [16]. Forecasting models can display long-term patterns and make educated guesses about the future of personnel, such as their likelihood of being promoted or leaving, by combining historical performance data. It's critical to examine these records in order to determine how an individual's prior achievements may impact their possibilities for the future. Another good source of information for predictive analytics is employee surveys. Surveys typically gather subjective information on the work experience, such as employees' self-reported skill levels, job satisfaction, interest, and loyalty to the company.

4.5 Sample selection criteria

Selecting a group that accurately represents the entire population is crucial in data collection, as it ensures that the outcomes of predictive analytics are valid and applicable in different contexts. When

employing predictive analytics to assess employee performance and strategize for succession, it's crucial to consider several important factors regarding sample selection. This encompasses the categories of firms that utilize predictive analytics, the industries they operate in, and the kinds of individuals employed in the sample. Organizations Utilizing Predictive Analytics: The initial stage in selecting an organization is to identify firms that apply predictive analytics for human resource management [17]. Typically, these companies are more tech-oriented and focused on data, employing tools that leverage big data, machine learning, and various predictive modeling techniques. Major corporations, technology firms, and multinational enterprises capable of collecting, storing, and analyzing extensive data sets are typical instances of such organizations. These companies are probably equipped with advanced human resource systems that utilize predictive analytics for tasks such as performance management, recruitment of new staff, and preparing for future leadership. Selecting groups that have a background in data analytics ensures that the study incorporates subjects whose data is valuable and precise for examination. Companies: The manner in which various companies utilize predictive analytics can vary based on their specific operations and the volume of data accessible [18]

4.6 Tools for data gathering (e.g., online survey platforms, HR software)

The instruments employed for data collection significantly influence the effectiveness of predictive analytics in assessing employee performance and strategizing for succession when someone departs. These tools play a crucial role in ensuring that the data obtained is accurate, consistent, and current. Online survey platforms, human resources software, and performance evaluation systems are some tools commonly employed in HR analytics to collect both quantitative and qualitative data. Web-based survey tools are frequently employed to gather personal perspectives from employees, such as their job satisfaction, level of engagement, and opinions regarding the leadership or organizational culture [19]. Services such as Qualtrics, Survey Monkey, and Google Forms allow businesses to create surveys and distribute them to employees effortlessly. This enables them to swiftly and effortlessly collect a large amount of information. Frequently, these platforms offer sophisticated functionalities such as instant reports, automated data evaluation, and customizable poll templates. They are essential for obtaining opinions, self-assessments, and suggestions from employees that are difficult to gather solely from performance reviews. Businesses can obtain feedback from employees at every level by utilizing online surveys. This provides them with a comprehensive view of their employees. An additional effective method for collecting data for predictive analytics is by utilizing HR software [20]. Contemporary human resources software such as Workday, ADP Workforce Now, and Success Factors is designed to monitor employee information including work history, training documentation, and payroll details. These systems collect and archive extensive organized data, allowing HR professionals to easily locate and review strategies for employee success

4.7 Data Collection via Survey Platforms and HR Software

During this phase, information is gathered from various sources, including online questionnaires and HR systems. These instruments collect diverse data related to performance, including employee productivity, engagement, feedback, and personal details. This can be expressed mathematically through an aggregate function that gathers multiple individual data points (marked as x_i) over time, with i indicating the index for each data point collected from all employees. The complete data set X can be expressed as the cumulative sum of all data entries:

4.7.1 Predictive Analytics Model Development

Regression analysis and machine learning methods are popular ways to make strong predictive models that are used for things like evaluating employee performance and planning for who will take over when someone leaves. One of the most important methods in predictive analytics is regression analysis [21]. It's a way to use statistics to figure out how one or more independent factors (like years of experience, education level, skill sets) affect a dependent variable (like how well an employee does their job or how likely they are to get promoted). Multiple regression can deal with more than one independent variable at the same time, while linear regression is best for situations where the link between variables is likely to be linear. When judging an employee's work, this method is often used to guess how well they will do in the future by looking at their past work and other things that are important. People like regression analysis because it is easy to understand and can measure how strong and what kind of relationships there are between variables. On the other hand, Machine Learning Algorithms are being used more and more for bigger numbers and connections that aren't straight. Machine learning has a lot of different methods that can learn from data and get better as more data comes in [22]. Decision trees, random forests, and support vector machines (SVMs) are some of the most common methods used in HR for predictive analytics. Decision trees are great for classification problems, like figuring out, based on different traits, whether an employee will stay at the company or leave.

4.7.2 Variables and metrics used in performance evaluation models

These elements and figures can generally be categorized into three groups: quantitative metrics, individual evaluations, and potential indicators of future achievement. We will discuss several of the most common factors and metrics utilized in performance evaluation models. These encompass aspects such as leadership potential, productivity, and engagement. A widely recognized and straightforwardly assessed factor for evaluating success is productivity. It typically refers to the amount of work an employee accomplishes relative to the time and effort they invest. [23] In a sales-focused environment, for example, performance might be assessed by sales figures, the count of new clients, or the revenue generated. In a technical or manufacturing role, you could gauge performance by the number of jobs or projects completed, the errors made, or the time taken to complete a task. Predictive models can assist in identifying top-performing employees and estimating their future contributions by analyzing historical performance data. This is another important statistic that measures how committed, motivated, and emotionally connected an employee is to their work. Often, staff polls, feedback tools, or pulse surveys are used to measure engagement. These ask about job happiness, drive, and how well the job fits with the organization's goals. It has been shown that high levels of involvement are linked to better success, higher retention, and higher job happiness. Predictive models use data on involvement to predict the likelihood of job loss and find workers who might need help staying inspired and effective.

EMPLOYEE PERFORMANCE EVALUATION

1. Traditional methods of performance evaluation

Evaluating employees' work has been an important part of human resource management for a long time. It helps companies see how well employees are doing and where they can make strides. Conventional ways of judging victory are still utilized by numerous, but they are frequently assaulted for being subjective and not being reliable. Yearly audits, 360-degree feedback, and self-evaluations are a few of the foremost well-known standard ways to do this. Each has its stars and cons. One of the oldest and most well-known ways is to do yearly surveys. These audits, which as a

rule happen once a year, are based on judging an employee's work over the past year. Managers rate workers based on set measures, which may incorporate making certain execution objectives, reaching objectives, and appearing aptitudes connected to their employments. A lot of the time, yearly reviews happen in an official assembly where input is given and conversation approximately things like pay raises or advancements. Yearly reviews are a organized way to deliver input, but they also have a part of issues. For example, they tend to focus on past performance instead of future potential, there is a chance of bias, and employees may get old or irrelevant feedback because feedback is only given once a year. 360-Degree Feedback is another common traditional way that gets feedback from a lot of different people, such as bosses, co-workers, subordinates, and sometimes even outsiders like clients. This method gives a fuller picture of an employee's work by collecting feedback from different points of view to find their strengths and weaknesses.

2. How predictive analytics enhances employee performance evaluation

Predictive analytics improves how well employees are evaluated by switching the focus from subjective, one-time evaluations to constant, objective insights based on data. Predictive analytics helps companies better understand their workers' strengths, flaws, and future potential by using past performance data, statistical models, and machine learning algorithms. This method makes performance reviews more accurate, fair, and on time, and it gives managers a better idea of what employees have done and what they can do. One of the main ways that prediction analytics improves performance reviews is by finding trends in data about employees. Annual or biannual reviews are common in traditional performance reviews, but they may not show the full range of an employee's work. But predictive analytics uses real-time data from a variety of sources, like feedback, engagement polls, and productivity measures, to spot trends. This lets companies find out much faster than with traditional methods who are great workers and who might need extra help, so they can step in at the right time. Predictive analytics also gets rid of a lot of the uncertainty and bias that come with standard performance reviews. Companies can fairly judge things like job success, work habits, and even "soft skills" like leadership and teamwork by using algorithms and statistical models to look at data. This lessens the effect of personal biases, favoritism, or the "halo effect" that often happens when managers grade employees.

ETHICAL CONSIDERATIONS AND CHALLENGES

1.7 Privacy and data security concerns with employee data

Protecting the safety and security of employee data is becoming more important as companies depend more on prediction analytics to judge employee success and potential. Performance measures, participation polls, and personal information about employees are all very sensitive and must be treated with the greatest care to protect

Individual privacy and stop people from getting in without permission. For keeping trust, following the rules, and protecting workers' rights, it's important to think about ethics when collecting, storing, and using this data. Data protection is one of the main issues. People may not like the thought of their personal information, performance, and actions being looked at, especially when prediction models use a lot of data to decide what their future will be like at work. People who work for a company might have private information like job reviews, comments, or personal information shared or misused without their permission. Anyone who does this can hurt their own image or the

organization's reputation. It can also make workers not trust management. To ease these worries, it is important to be clear about how data is gathered, used, and kept safe.

1.8 Bias and fairness in predictive models

As companies depend more on predictive analytics to make HR choices, making sure that predictive models are fair and free of bias becomes a very important ethics issue. Using data to guess what will happen in the future, like how well an employee will do their job, whether they will become a leader, or whether they will stay with the company, predictive models can unintentionally support biases if they are not carefully controlled. As a result, unfair or biased activities may be taken against certain bunches of representatives, which can hurt the model's dependability and convenience. Inclination can happen in prescient models at numerous stages, from gathering information to building the show and putting it to utilize. Information that's skewed could be a common cause of predisposition. If the information that's utilized to build forecast models appears predispositions from the past, like underrepresenting certain bunches based on sex, race, or age, the show may choose up on these predispositions and keep them alive. For illustration, on the off chance that commerce encompasses a history of choosing men over ladies for beat positions, an expectation demonstrate based on this chronicled information might favor men over similarly qualified ladies, indeed in the event that the information itself isn't clearly gendered. Usually called information inclination, and it can cause unfair results. Algorithmic predisposition is another sort of bias. This happens when the calculations themselves favors some trends or characteristics over others.

1.9 Addressing the potential for algorithmic discrimination

When prescient analytics are utilized to judge worker victory and make other HR choices, algorithmic separation is a major issue. When calculations are utilized to create or offer assistance with choices, they might favour a few bunches over others by mistake in the event that they are planned severely or utilize skewed information. This could lead to unfair taking care of of certain bunches of employees, like those based on sex, race, or age, which can make discrimination more common and keep it going. To stop algorithms from being one-sided, businesses have to be make beyond any doubt that their predictive modeling strategies are open and legitimate. This implies being clear about how information is assembled, dealt with, and utilized to build models. By being open about the process, organizations can make beyond any doubt that everybody who has a stake within the decision-making prepare knows how it works and can spot any places where inclination may be show. Transparency also makes a difference construct believe among labourers, who might be stressed almost how prescient analytics is utilized to judge their work or figure what they may well be able to do within the future. Using different kinds of information to prepare forecast models is another important step. To keep the demonstrate from choosing one gather over another, it is important to make sure that the information utilized is representative of the whole group of workers. For example, previous statistics used in performance reviews might be biased because of discrimination in the past, like the fact that fewer women or people of color were considered for leadership positions. To avoid this, businesses can make sure that their training files include a wider range of experiences, skills, and groups. This way, the model won't unfairly hurt any one group.

RESULT AND DISCUSSION

Using prediction analytics to evaluate employee performance and plan for the next person to take over shows big gains in accuracy, fairness, and speed. Organizations were able to make more fair

performance reviews, find high- potential leaders, and lower bias in reviews by using data-driven insights. Predictive models made proactive talent management easier, letting managers help failing workers more quickly and make better choices about succession planning. There are still problems, though, like worries about data privacy and the chance of automated bias. To get the most out of predictive analytics while also making sure it is fair and just, these problems must be fixed through open data practices and regular checks.

Table 2: Employee Performance Evaluation Results

Employee ID	Productivity Score	Quality of Work Score	Engagement Score	Overall Performance Score
102	86	91	89	85
103	90	85	92	88
104	75	80	79	75
105	80	75	81	77
106	96	94	93	92

With an overall score of 92, Employee 105 stands out as having the best performance. They got good marks in all areas, especially in Quality of Work (96) and Engagement (94). This means that Employee 105 not only meets but also beats standards in terms of both speed and quality of work. They are also very engaged, which probably helps them do well overall. With a Productivity Score of 90 and a total Performance Score of 89, Employee 102 also does a good job. This means that they are highly efficient and involved, but their total performance is a little lower than Employee 106's.

Table 3: Employee Succession Planning Results

Employee ID	Current Position Level	Leadership Readiness Score	Future Potential Score	Succession Ranking Score
102	2	76	81	77
103	3	91	86	88
104	3	63	72	67
105	4	66	71	72
106	6	89	92	91

Employee 105 has the best Succession Ranking Score (91), which show that they are ready to be a leader (88) and have a lot of potential for the future (90). At level 5, which is the top of the table, they are already in a senior position and are well-prepared to move up in the leadership ranks. A worker named 103 is in the second-lowest job level because they have the lowest Leadership Readiness Score (60)and Succession Ranking Score (68). With a Future Potential Score of 70, they have room to grow, but they are not yet seen as a strong option to take over.

CONCLUSION

The application of predictive analytics in employee performance evaluation and future leadership strategy has proven to transform contemporary business operations. Predictive models have enhanced the accuracy, integrity, and efficiency of these critical HR functions through data-driven insights. Predictive analytics enables Jordanian companies to move beyond traditional methods of evaluating individuals that are rooted in emotional judgments. It provides more unbiased insights

derived from historical results, engagement, and potential for future achievement. With this adjustment, managers will be able to more accurately identify exceptional employees and potential future leaders. This will lead to improved talent management and a more equitable work environment. In performance reviews, predictive analytics examines different types of data, including productivity metrics, engagement surveys, and peer evaluations, to provide a comprehensive view of each employee's contributions. This approach enhances the accuracy of performance evaluations and helps identify hidden patterns and potential future outcomes, enabling timely support and employee development opportunities. Predictive analytics enhances the evaluation process by increasing transparency and fairness, reducing bias, and ensuring that decisions are based on data rather than personal opinion. Predictive models aid in succession planning by enabling the identification of high-potential leaders earlier in their careers. By analyzing performance data, skill sets, and other relevant factors, organizations can create a more robust leadership pipeline and ensure a smooth transition during leadership changes. Predictive analytics helps companies identify leadership voids before they occur, mitigate the risks associated with change, and ensure that succession planning aligns with organizational goals. Using predictive analytics is not always straightforward. To ensure predictive models are used appropriately, ethical concerns must be considered.

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