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AI Report

Can AI Help Us Keep Up With AI?

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Dr. Abdulla Al Shimmari is CEO of HCMS.ai—an artificial intelligence, machine learning, and data science-powered system that helps to shorten the global skills gap. Previously, he worked in the Engineering Department of Abu Dhabi Police as a Major-Officer and Head of the Research & Development Team. He received his Ph.D. in AI, NLP, and Data Science from the Massachusetts Institute of Technology (MIT) & Masdar Institute of Science and Technology Cooperative Program.

Al Shimmari has vast experience in technology, entrepreneurism, and innovation with 12 national and international awards records. He is a board member of the Arab Youth Research Council and the HCT Industry Advisory Council. Al Shimmari co-founded several tech-based businesses such as AMS Technology, RestHero.io, and HCMS.ai.

The world has already had three industrial revolutions. Now it is in the middle of a fourth, led by artificial intelligence (AI), and a fifth is on the way that will involve rebalancing the relationship between increasingly advanced technology and humans.

There are drastic differences between all five of these seismic shifts in the way society works, but they have one thing in common. Each has changed the skill sets that humans need, and with each revolution, our skills gap has widened.

Every new technology results in some human skills becoming outdated. The arrival of GPS in the 1960s changed the world of map reading, making us less dependent on manually locating and remembering landmarks. Today, generative AI such as ChatGPT and Jais - the highest performing open source Arabic Large Language Model (LLM) in the world, developed by Inception - a G42 company, Mohammed bin Zayed University for Artificial Intelligence (MBZUAI) and Cerebras Systems, looks set to trigger a drop in demand for a vast number of skills that used to be the exclusive domain of humans, such as content writing and customer service.

However, if positioned carefully, AI can help us keep up with the demands of a world that is changing because of AI.

Embracing AI

The job market has seen dramatic shifts in recent years due to the rise of technology, COVID-19, globalization, and changes in societal expectations. Among these shifts has been the increasing importance of skills such as AI proficiency, data analytics, digital marketing, and coding.

It has become increasingly evident that traditional educational institutions need to adjust their curricula to reflect this new reality or face falling enrollment numbers and potential obsolescence. The key lies in the successful synthesis of the traditional and digital worlds. The introduction of ChatGPT into the curricula is an example of this. While some countries have chosen to ban the use of AI in education, the UAE's Ministry of Education has embraced the technology and made it part of the learning process. This strategic decision places students at an advantage in the job market, especially in tech-driven sectors, and helps the UAE remain competitive in the global arena.

The advent of EdTech has added another layer of complexity for educational institutions, but it also provides an avenue that can allow them to adapt and remain relevant. The EdTech boom and its job-ready course offerings should be seen not as a threat, but as an opportunity for educational institutions to upgrade their offerings and align more closely with the current and future job market. By collaborating with EdTech companies, educational institutions can ensure their students are learning relevant skills and are job-ready upon graduation.

However, the uneven acceptance and adoption of new

technologies across regions risks creating an imbalanced educational landscape. Students in regions with less advanced technology uptake may face a disadvantage compared to those elsewhere who are becoming proficient in AI and digital skills. To bridge this gap, global educational institutions and governments must understand and respond to current job market trends. Educational institutions now serve as a conduit between learners and the job market, expanding their role beyond theoretical knowledge. Fostering an environment where learners gain practical skills relevant to the modern workplace is crucial—and not just for today. It also prepares students to meet future talent requirements.

Instilling a lifelong love of learning is vital given the rapid technological advances we are witnessing. The job market will keep evolving and that means the skills people need will keep changing. Institutions must therefore also teach students adaptability alongside academic and technical skills.

The challenges ahead are undeniable, but by collaborating, embracing technology, and enabling a shift in mindsets, educational institutions can reshape the world of learning and empower students to thrive in a dynamic job market.

What AI can do: Automatable skills

There are many tasks that AI or another type of technology can—or will soon be able to—perform more efficiently or effectively than humans. These are typically repetitive, rule-based, or data-driven tasks. On the other hand, there are areas where humans can complement AI and tasks where humans have an advantage over AI.

The following are some examples of already automatable skills:

Data analysis
AI's ability to quickly process and analyze large volumes of data makes it highly suitable for tasks such as data analysis. AI algorithms can identify patterns, correlations, and insights within data that might be challenging for humans to detect within a reasonable timeframe.

Repetitive tasks
Many routine tasks that follow a set of predefined rules can be automated using AI. This can allow organizations to free up human resources to focus on more complex and creative work, leading to increased productivity and efficiency.

Information retrieval
AI-powered search algorithms have revolutionized information retrieval. They can swiftly find information from extensive databases or the internet, providing instant access to knowledge and eliminating the need for manual search efforts.

Image and speech recognition
Thanks to advanced algorithms, AI systems excel at categorizing and interpreting images, audio, and speech. This enables applications like facial recognition, transcription services, or content analysis.

Process automation
AI can streamline and automate workflows by eliminating manual steps. This can allow organizations to optimize operational efficiency, reduce errors, and improve overall productivity.

What AI can't do: Human skills

While AI has made significant advances, there are still large areas where human skills cannot be replaced, or where humans can work alongside AI.

Creativity and innovation
Humans have a unique ability to think creatively, imagine new possibilities, and come up with innovative solutions to complex problems.

Emotional intelligence
Humans possess emotional intelligence, allowing them to understand and empathize with others, making them invaluable in roles involving customer service, counseling, or negotiation.

Critical thinking and judgment
Humans can apply critical thinking and judgment to analyze ambiguous situations, evaluate multiple factors, and make decisions based on complex and contextual information.

Adaptability and learning
Humans can quickly adapt to new situations, learn from experiences, and apply knowledge to novel scenarios, making them flexible in dynamic environments.

Ethical decision-making
Humans can consider ethical implications, social impact, and moral reasoning when making decisions, which is crucial in fields such as law, healthcare, and policymaking.

Where AI has a competitive edge

While humans possess unique qualities and capabilities, there are certain areas where AI has the potential to surpass human performance:

Speed and efficiency
AI systems can process vast amounts of information and perform tasks at an incredibly high speed, far surpassing human capabilities. When dealing with large-scale data processing or complex calculations, AI outperforms humans in terms of speed and efficiency.

Memory and recall
AI systems can also store and retrieve vast amounts of information with near-perfect accuracy, whereas humans are limited by their memory capacity, and are prone to forgetting or distorting information.

Repetitive and monotonous tasks
Humans can become bored, fatigued, or distracted when performing repetitive tasks for extended periods. AI, on the other hand, can operate continuously without experiencing such limitations, ensuring consistent and accurate execution of repetitive tasks without a decline in performance.

Pattern recognition
AI algorithms excel at recognizing complex patterns in data.
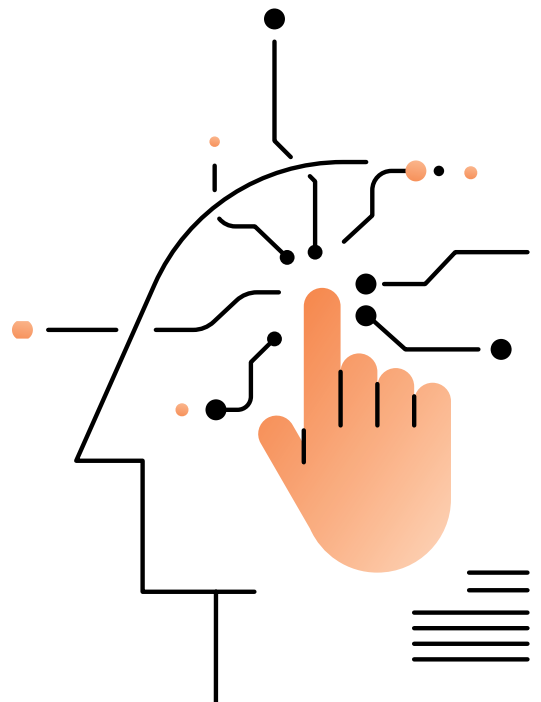
The rise of reskilling

Disruptive technologies have profoundly impacted global markets, creating new segments, jobs, and wealth. However, they have also led to job losses and closures for those unable to keep up. Skill shortages are already affecting **80%** of US manufacturing firms, hindering customer service, production, and growth. The World Economic Forum predicts that **50%** of employees worldwide will need upskilling because of advances in technology.

While AI is raising job displacement concerns, studies show that new opportunities can be created.
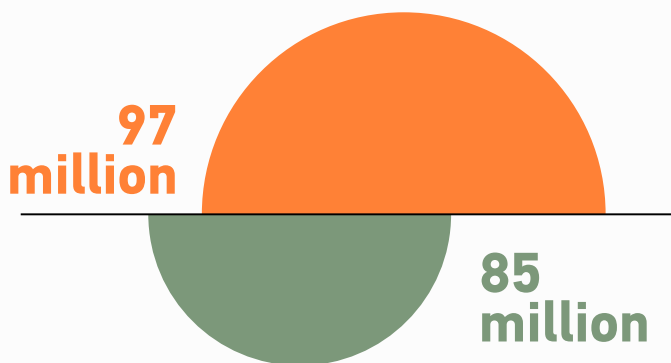
95% In the US, about **95%** of the **1.4 million** workers at risk of displacement within a decade could transition to higher-paying roles.

40% Around **40%** of their skills are projected to change significantly, which is why reskilling programs are vital to equip individuals and companies for the future.

Job landscape

By **2025**, new jobs will emerge and others will be displaced by a shift in the division of labour between humans and machines, affecting:

97 million

85 million

Growing job demand
- Data Analysts and Scientists
- AI and Machine Learning Specialists
- Big Data Specialists
- Digital Marketing and Strategy Specialists
- Process Automation Specialists
- Business Development Professionals
- Digital Transformation Specialists
- Information Security Analysts
- Software and Applications Developers
- Internet of Things Specialists

Decreasing job demand
- Data Entry Clerks
- Administrative and Executive Secretaries
- Accounting, Bookkeeping and Payroll Clerks
- Accountants and Auditors
- Assembly and Factory Workers
- Business Services and Administration Managers
- Client Information and Customer Service Workers
- General and Operations Managers
- Mechanics and Machinery Repairers
- Material-Recording and Stock-Keeping Clerks

Source: Future of Jobs Report 2020, World Economic Forum.

Long-running international research has looked at developing, standardizing, and analyzing skills and job descriptions. The International Labour Organization (ILO) has outlined the skills it thinks will be needed in the UAE's green jobs market, amid an economic shift away from oil. The UAE has actively collaborated with the ILO since 1972 to improve labor market information systems and governance. Entities in the UAE such as the Ministry of Human Resources and Emiratisation (MoHRE), the Federal Authority for Government Human Resources (FAHR), and the Abu Dhabi Human Resources Authority (HRA) are also enhancing labor reporting systems to reflect job requirements more accurately.

Technological advances such as AI, machine learning, and robotics will drive efficiency improvements and change the landscape of labor needs. However, comprehensive research on shifting skill demands and market changes is lacking.
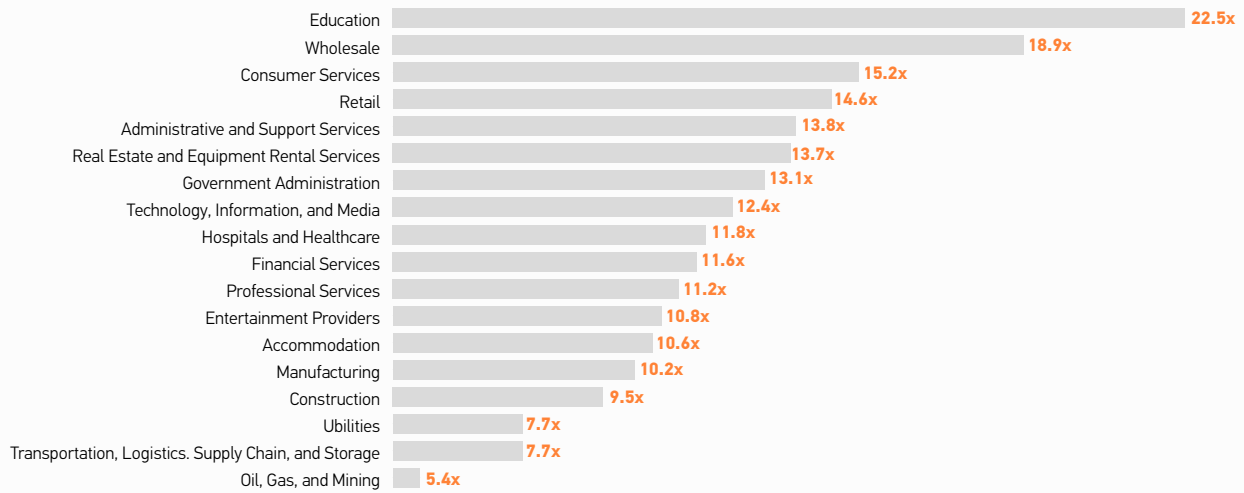
Such research will be vital to understanding trends, ongoing developments, and future job market dynamics.

Proactive measures are also essential to ensure reskilling investments are equipping workers with the most appropriate skills. Organizations must prioritize comprehensive reskilling programs to maximize employee potential and mitigate job displacement.

A skills-first approach to hiring

In the face of economic instability and rising global inequality, it is crucial to rethink workforce preparation and create a fairer system for talent matching. Companies will have a critical need for highly skilled workers in a world of technological advances and changing job requirements, but traditional methods of talent acquisition

Skill-First Talent Pool Increase By Industry

Industry	Increase
Education	22.5x
Wholesale	18.9x
Consumer Services	15.2x
Retail	14.6x
Administrative and Support Services	13.8x
Real Estate and Equipment Rental Services	13.7x
Government Administration	13.1x
Technology, Information, and Media	12.4x
Hospitals and Healthcare	11.8x
Financial Services	11.6x
Professional Services	11.2x
Entertainment Providers	10.8x
Accommodation	10.6x
Manufacturing	10.2x
Construction	9.5x
Utilities	7.7x
Transportation, Logistics. Supply Chain, and Storage	7.7x
Oil, Gas, and Mining	5.4x

Source: LinkedIn

mean they are often overlooking individuals without certain credentials. This results in a lack of diversity in the workforce and missed opportunities for employers and job seekers.

To overcome these challenges, governments and businesses must embrace a skills-based approach to hiring, adapting to a dynamic talent market. By prioritizing skills over traditional qualifications, we can reshape the workforce and empower individuals to reach their full potential. This requires new ways of analyzing, assessing, and mobilizing people's skills, meaning the hiring process will have to look beyond traditional metrics and find new ways of matching people to positions.

The aim is to create a labor market that recognizes and leverages individual capabilities, and this will require roles to be deconstructed into specific skill sets. Prioritizing skills in this way can expand the talent pool, democratize job access, and strengthen the resilience of the labor market and workforce. In addition, by increasing access to training and promoting skill development, we can cultivate a more engaged workforce, drive economic productivity, and foster a fairer society.

Employers are already embracing this shift, using skills data to fill positions and reducing the emphasis on degrees in job postings. The value of learning and skills enhancement is also gaining recognition among job seekers.

Employment history and traditional educational achievements have long been used by employers to evaluate candidates. However, this approach is flawed and increasingly inadequate. Research indicates that traditional signals like years of experience do not accurately predict job performance. Moreover, a significant portion of the workforce lacks access to

higher education opportunities, leading to exclusion for many individuals.

The changing global economy and demographic shifts have heightened the need to rethink labor market approaches. Aging populations, declining numbers of people of working age, early retirements, and reduced immigration pose challenges for employers in filling certain roles. Additionally, the rapid evolution of job requirements presents new difficulties for businesses and governments in training and developing the future workforce. It is therefore crucial to reassess how talent is hired and nurtured.

20% of U.S.job posts on LinkedIn don't require a four-year degree.

15%	20%
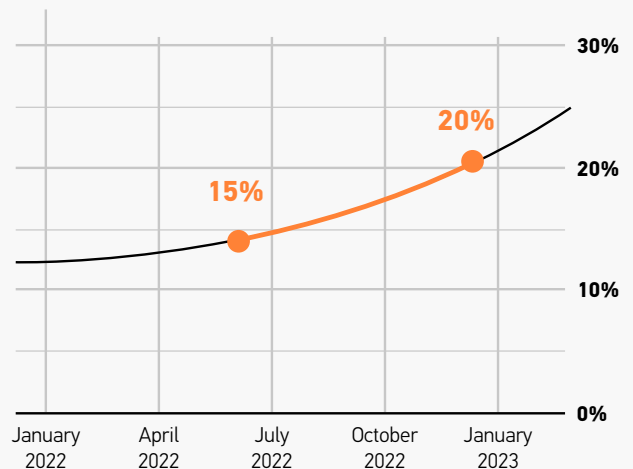
Source: Future of Recruiting Report 2023-LinkedIn

A skills-first approach benefits businesses and organizations by expanding their talent pool and promoting diversity. This recognizes that individuals may possess relevant skills without traditional credentials or comparable job titles. It also allows employers to find candidates in different sectors with transferable skills.

Prioritizing skills throughout the employment cycle also offers significant advantages beyond the hiring phase. LinkedIn data reveals that investing in employee learning and growth improves staff retention rates. Employees who have made internal moves within two years of joining an organization have a **75%** chance of staying with that employer, compared with **56%** for those who have not.

Industries facing hiring challenges could expand their talent pool by up to a factor of **20** by adopting a skills-first approach. Despite today's economic difficulties, job openings still outnumber applicants by nearly double the pre-pandemic average in some countries. Labor shortages are expected to persist due to factors such as the uneven economic reopening post-pandemic, demographic changes, and shifts in where people live and work.

Facilitating the transition of workers to in-demand jobs that match their abilities is essential during times of rapid change. This means it is crucial to broaden the talent pool to include all skilled workers, even those without specific job titles or industry experience. A key part of this is enabling employers to identify and hire based on skills rather than past job titles, and skills-first hiring is gaining momentum. The use of skills filters in recruiter searches on LinkedIn has increased by **25%** since 2019, with recruiters now **50%** more likely to search by skills rather than experience.
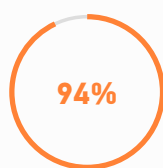
94% of recruiting professionals agree that understanding the skills employees possess and lack is essential for informed talent decisions

Skills-first hiring is becoming the standard for the future. Recruiting professionals consider it a top priority in **75%** of organizations, although only **64%** feel confident in accurately assessing candidates' skills. Efforts, therefore, need to focus on bridging this gap by improving skills evaluation.

Overall, recruiters expect skills-first hiring to become a priority within **18 months**. Mapping employee skills is crucial for this, with **94%** of recruiting professionals saying it is key to making informed talent decisions. This means talent acquisition teams will have to differentiate between "must-have" and "nice-to-have" skills for all roles.

Collaboration is crucial to reskilling

The saying "It takes a village to raise a child" signifies the idea that collaboration and collective effort are essential to addressing challenges and achieving common goals. In the context of bridging the gap in human capital management, it emphasizes the need for various stakeholders to come together and work as a cohesive unit.

When it comes to upskilling and reskilling, no single entity can solely address the complexities and demands of the evolving job market. Governments, educational institutions, employers, and individuals will each play a crucial role, and they will all need to collaborate to ensure the success of any initiatives. Each stakeholder brings unique perspectives, resources, and expertise to the table.

1. What educational institutions can do
Educational institutions play a vital role in bridging the skills gaps in various industries. To do so, they must stay up to date with industry trends and revise their curricula accordingly. Collaborating with employers can also help educational institutions identify skills gaps and develop programs to address them. This can in turn link back to employers by guiding their thinking on the kinds of internships and apprenticeships they need to offer students.

Promoting STEM education is another means of closing the skills gap that currently exists in areas such as healthcare, technology, and manufacturing. Educational institutions can also contribute to ongoing employee training in these and other fields.

2. What industry leaders can do
Industry leaders will also need to play a major role in closing the skills gap. They must provide accurate information on sought-after skills, enabling job seekers to make informed decisions about their education and career paths. By helping shape educational programs, industry leaders can also ensure graduates possess relevant skills.

For existing employees, offering training and professional development opportunities will be indispensable to keep them up to date with the evolving skills landscape, and this will benefit both workers and companies. Collaborating with educational institutions to establish apprenticeship and internship programs will provide students with practical experience and help them develop essential skills for their future careers.

Most useful actions to close capability gaps in the next year, % of respondents ranking each action first

WORLD ECONOMIC FORUM | pwc | EY | McKinsey & Company | Deloitte.

6%
53%
20%
20%
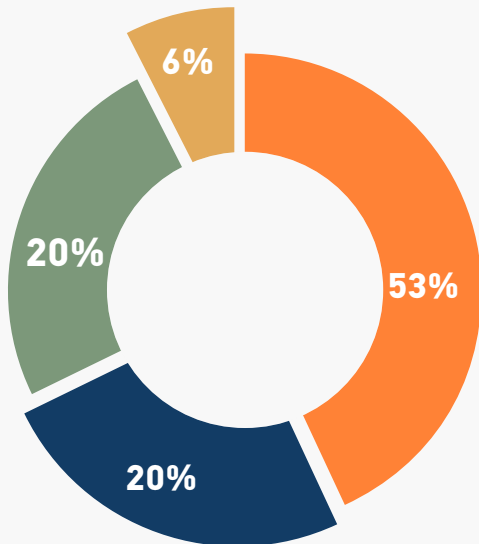
Contracting
(eg. engaging freelancers, contractors)

Hiring
(eg. Finding/ hiring additional talent and aquiring other firms)

Redeploying
(eg. shifting workers to new roles)

Building Skills
(eg. reskilling existing emploees)

Source: World Economic Forum & Mckinsey

3. What individuals and teams can do

Talented individuals seeking employment have a role to play in addressing the skills gap by actively engaging in their own education and training. Staying informed about high-demand skills in their industries is crucial. This will involve researching industry trends, attending events, and seeking expert advice. Accessing training and professional development opportunities will also be vital for them to acquire new skills. Online courses, workshops, and certifications will be part of this, but developing soft skills such as communication and problem-solving will be equally important. This can be achieved through volunteer work and internships that foster teamwork and leadership abilities. Serving as mentors and role models to others is another way for talented individuals to contribute to closing the skills gap. By sharing their knowledge and experience, they can support others in their career journeys.

Human Capital Management Software (HCMS) is a set of technologies that businesses can use to manage their employees throughout their employment lifecycle—from the hiring process to retirement. Through the HCMS AI-powered

system, integrated assessment tools like PrinciplesYou and PrinciplesUs from PRIOS are augmenting the field of self-awareness and team dynamics. By leveraging the expertise of leading psychometrics experts Adam Grant and Brian Little, and the experience and insight of Ray Dalio, the Principles Assessment offers a comprehensive understanding of individuals' cognitive, interpersonal, and motivational preferences. This can help empower individuals with the awareness required for making good decisions and getting things done, enabling teams to work more effectively together.

Through this comprehensive integration of powerful AI tools and intelligent assessments, individuals and teams gain invaluable knowledge about their strengths, areas of improvement, and how they relate to others, fostering meaningful relationships in both work and personal life.
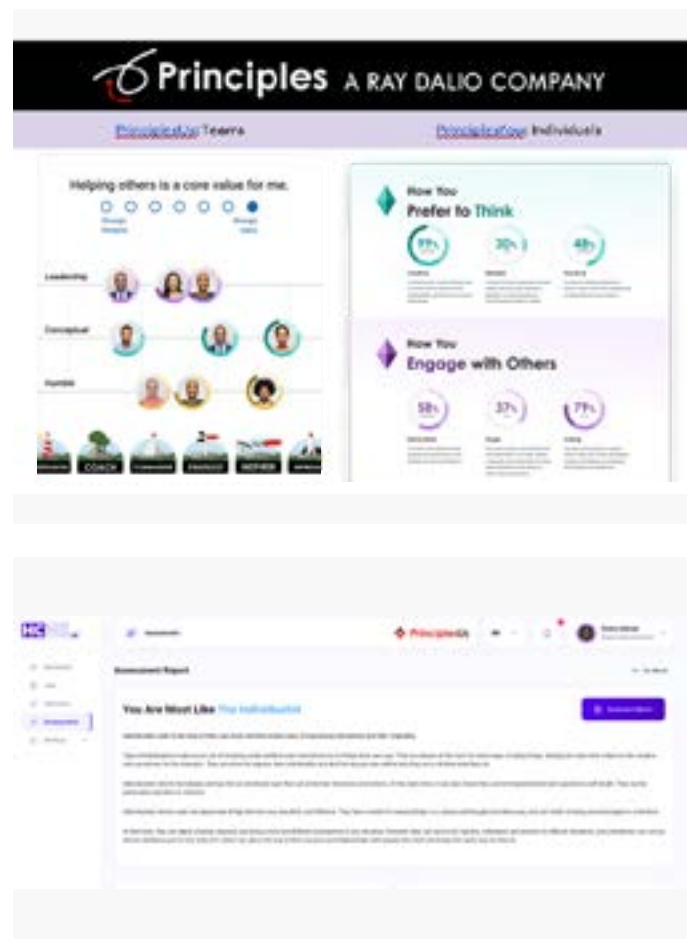

How can HCMS.AI help?

HCMS is designed to help streamline the human capital management process for organizations. It can also provide immediate value to customers as it is delivered through a software as a service (Saas) model.

The HCMS platform serves educational institutions, the private and public sectors, and individuals, providing an

all-encompassing solution for human capital management. Providing a single platform for organizations to manage their entire workforce, HCMS offers the potential to revolutionize the HR industry, particularly for businesses seeking to improve employee engagement, productivity, and overall management capabilities.

HCMS leverages state-of-the-art natural language processing (NLP) and machine learning (ML) algorithms to analyze skills, tasks, roles, and labor market data related to positions, workers, and careers. This helps organizations make better-informed decisions regarding their employees, from recruitment to succession planning and upskilling.
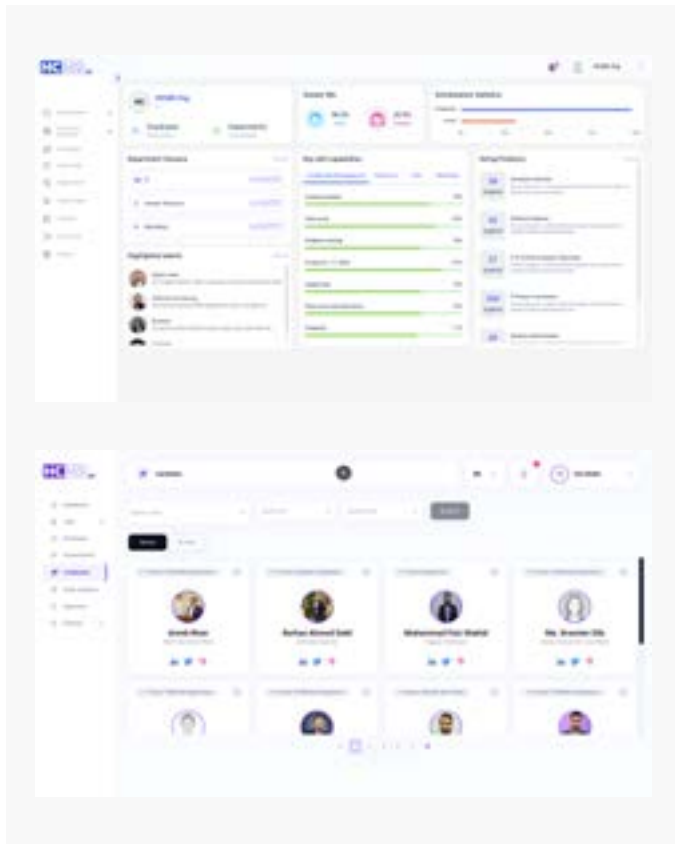

Recruitment

The Recruitment/Mobility/Succession Planning module of the HCMS platform is designed to simplify and streamline the hiring process while promoting internal mobility and career development opportunities. It uses AI and ML algorithms to standardize job profiles and descriptions, making it easier for recruiters to identify and hire top talent. The AI-based candidate-matching solution allows recruiters to find the best fit for a position quickly, reducing the time and cost associated with the recruitment process. The platform also provides a 360-degree view of employee skills and career goals, facilitating succession planning and internal mobility.

By leveraging AI and NLP, the Recruitment/Mobility/ Succession Planning module offers a unique value proposition that can be immediately realized by organizations. Standardizing job profiles and descriptions reduces ambiguity and improves communication between hiring managers and recruiters, ultimately leading to more successful hires. Organizations that understand employee skills, preferences, and career goals can offer targeted upskilling and career development opportunities, promoting employee engagement and reducing turnover.

The module's focus on internal mobility and succession planning also helps organizations fill open positions with suitably qualified employees, reducing the cost and time associated with external recruitment while improving employee retention and job satisfaction.

Upskilling and reskilling

The Up/Re Skilling module of HCMS is designed to provide organizations with targeted upskilling and reskilling opportunities for their employees, based on unbiased skills analysis. This helps organizations identify skill gaps among their current and future employees and find courses that will equip them with the skills required to be successful in their roles. Organizations that offer customized training can increase employee engagement, productivity, and retention.
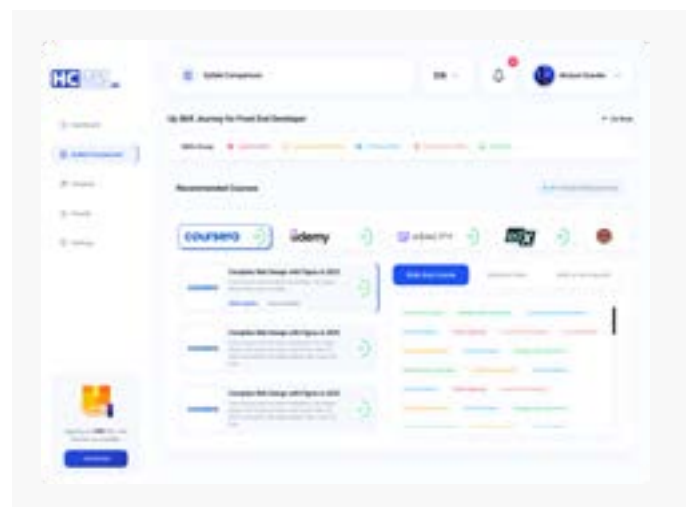
The Up/Re Skilling module has several features to help organizations develop their workforce. It leverages its own set of NLP algorithms to analyze employee skills and job roles, enabling it to determine skill gaps and training needs. It can then recommend training courses that will help employees acquire these skills or enhance existing ones. Once training is underway, it can track employee progress and provide real-time feedback.

These capabilities can reduce the cost of hiring and onboarding new employees. They can also promote employee

development, boosting job satisfaction and motivation, which leads to higher productivity and engagement. Another potential benefit is enabling organizations, through their skilled staff, to keep up with industry trends and adapt to new technologies.

AI-driven platform

HCMS is built around state-of-the-art customized ML models that analyze and structure data related to resumés, skills, job roles, courses, and training programs.

It also provides analysis in the form of an interactive dashboard that draws on real-time labor market data and platforms. This provides organizations with an overview of their current and potential workforce, including data on skills, roles, tasks, and labor market trends. The dashboard presents data in an easy-to-understand format, allowing organizations to quickly identify key insights and make informed decisions.

The future of online interviews: AI bots

The way companies conduct employee interviews has evolved significantly thanks to digital developments. A groundbreaking AI Interview Bot powered by advanced NLP and ML algorithms promises to revolutionize the process further.

Offering unparalleled efficiency, objectivity, and convenience, it benefits recruiters and candidates and streamlines the online interview process. There will no longer be scheduling conflicts or geographical limitations because candidates will be able to participate in interviews from anywhere, at any time, ensuring a truly global reach for talent acquisition. Recruiters will also benefit from the ability to scale their interview processes effortlessly, saving valuable time and resources.

The AI Interview Bot has a sophisticated conversational interface, allowing it to engage with candidates naturally and interactively. By removing human bias in its analysis of responses, behavioral traits, and qualification assessments, it can ensure a fair evaluation process that assesses candidates solely on their skills, experience, and potential.

Use cases

Enterprise (HRMS Systems)
HCMS can be used by large corporations and SMEs to empower their Human Resource Management Software (HRMS) and manage their workforce more efficiently.

Educational institutions (LMS)
In addition to analyzing the "supply of skills" from educational curricula, the HCMS platform's AI-driven engine can be integrated with Learning

Students and talents
HCMS is also useful for individuals seeking to enhance their skills and advance their careers. HR authorities can use HCMS to monitor the labor market trends and predict the skills needed in the future workplace. Management Systems (LMS) to provide targeted upskilling opportunities to educators and students.

The way to keep up with AI

The only way to keep up with AI is to act swiftly and strategically. The labor landscape is shifting significantly and those who do not keep pace with the changes will fall off the map.

A first step for companies and HR departments is to employ data science techniques and HCMS to identify the "automatability" of all skills. This is not a way of replacing humans but of supplementing their talents with AI systems, fostering synergies that can be beneficial for our economy and society.

Next must come identification of the jobs most vulnerable to automation. This will allow foresight into the potential impacts of job loss and enable the establishment of supportive measures for those most affected, reducing any potential unemployment and socio-economic disturbance. The importance of upskilling and reskilling cannot be overstated. As AI systems increasingly take over elements of today's jobs, we must prioritize equipping workforces with adaptable, future-proof skills. This can be achieved through practical training programs and continuous learning initiatives that cater to the evolving demands of the job market.

A reactive approach will not be good enough in the age of AI. A proactive approach is the only option, and it must be grounded in data-driven insights and an unwavering commitment to talent development. Recalibrating, reshaping, and readying our workforce is the only way to make the most of the opportunities that await in the transformative years ahead.