# 2024 Annual trends: Global state of the skills economy

cornerstone

## What's Inside





cornerstone

# What is a skills economy?

Historically, economic success relied heavily on physical assets like factories and infrastructure. However, as the global economy evolved, the source of economic value shifted as well. Intangible assets like skills, knowledge, and intellectual property now account for a larger share of economic value than physical assets in many developed economies.

This shift also rings true for organizations. Companies investing in intangible assets, including human capital, tend to grow faster and outperform their peers. These "high growth" companies invest significantly more in developing their workforce, directly contributing to their competitive advantage and superior economic performance.

**Why are skills so crucial in today's world?** Because skills are changing faster than organizations and individuals can upskill, and the ability to innovate and adapt quickly is out of sync with the pace of change, causing a workforce readiness gap. Having the right skills and visibility into current and future needed skills is a company's most valuable asset.

Organizations with strong learning cultures are 92% more likely to innovate, meet market demands, and stay ahead of competitors. With adequate investment in skill development, employees become 2.5 times more equipped to adapt to changes at work. Overall, companies prioritizing skill development see substantial benefits — on average, a 24% higher profit margin. This highlights the financial and strategic value of focusing on what employees can do, rather than what they've done in the past.

# The state of the skills economy

In a world where reacting to today's demands means you're already behind, how do you ensure a workforce is agile and future-ready? And ultimately, how do you forecast future skills to stay ahead of the curve? This is where real-time analysis comes in. Understanding the forces at play — economic shifts, technological advancements, and demographic changes — is essential to accurate forecasting, and here's what we know.

## Impact of technological advancements on skills

By 2026, 40% of all employees will need to learn new skills because of advancements in AI and automation. It's a double-edged sword: while these technologies drive innovation, they also make our current skills outdated almost overnight. Research shows that by 2025, more than two-thirds of today's critical skills will be different.

Traditional education systems just can't keep pace, leaving Gen Z entering the workforce in need of extra training, and older generations relying on employers to provide upskilling opportunities to unlearn and relearn processes and systems they were once proficient in.

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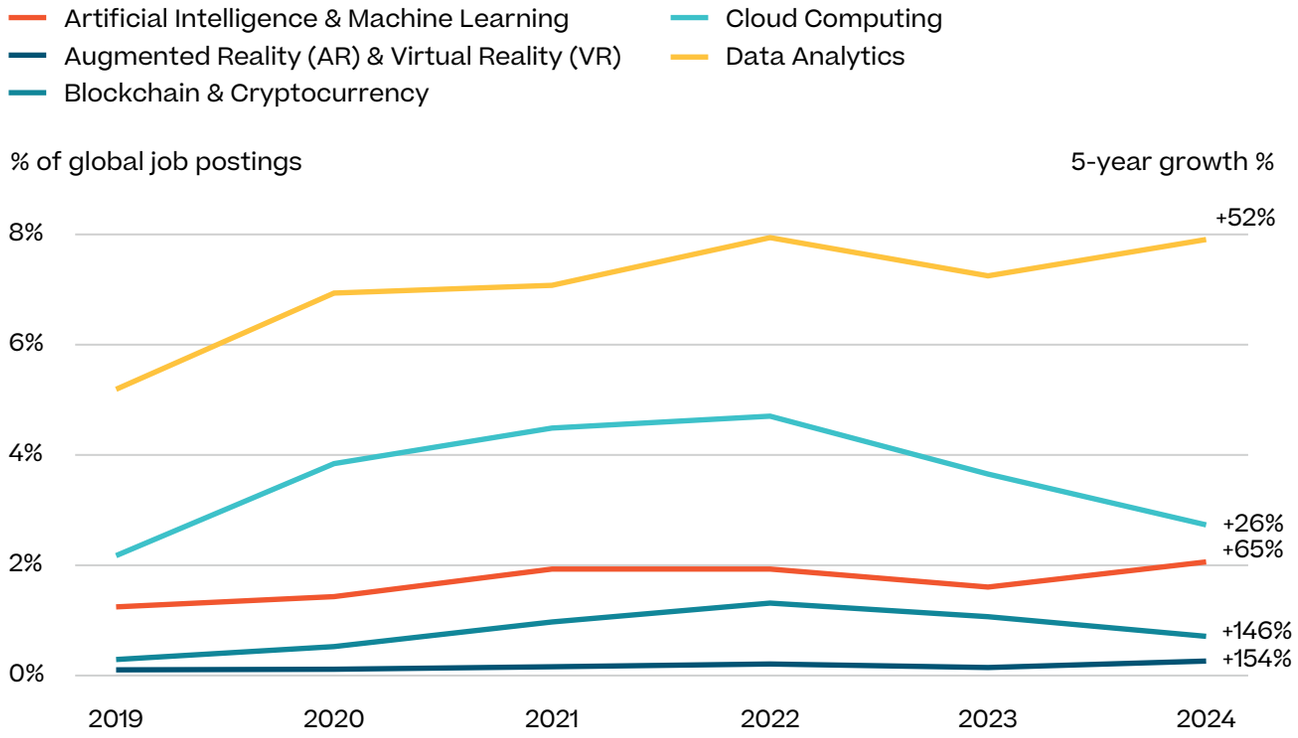
# Impact of technological advancements on skills

### Demand for digital skills

In today's fast-paced technological era, digital skills are becoming increasingly vital across all industries, including non-traditional tech sectors. Leveraging labor market data from SkyHive by Cornerstone, we analyzed the most sought-after digital skills, from data analytics to robotics — and, of course, GenAI. As organizations accelerate their digital transformation efforts, understanding these skills will be essential for both job seekers and employers aiming to stay competitive in a rapidly evolving landscape.

## Global Share of Demand in Digital Technology

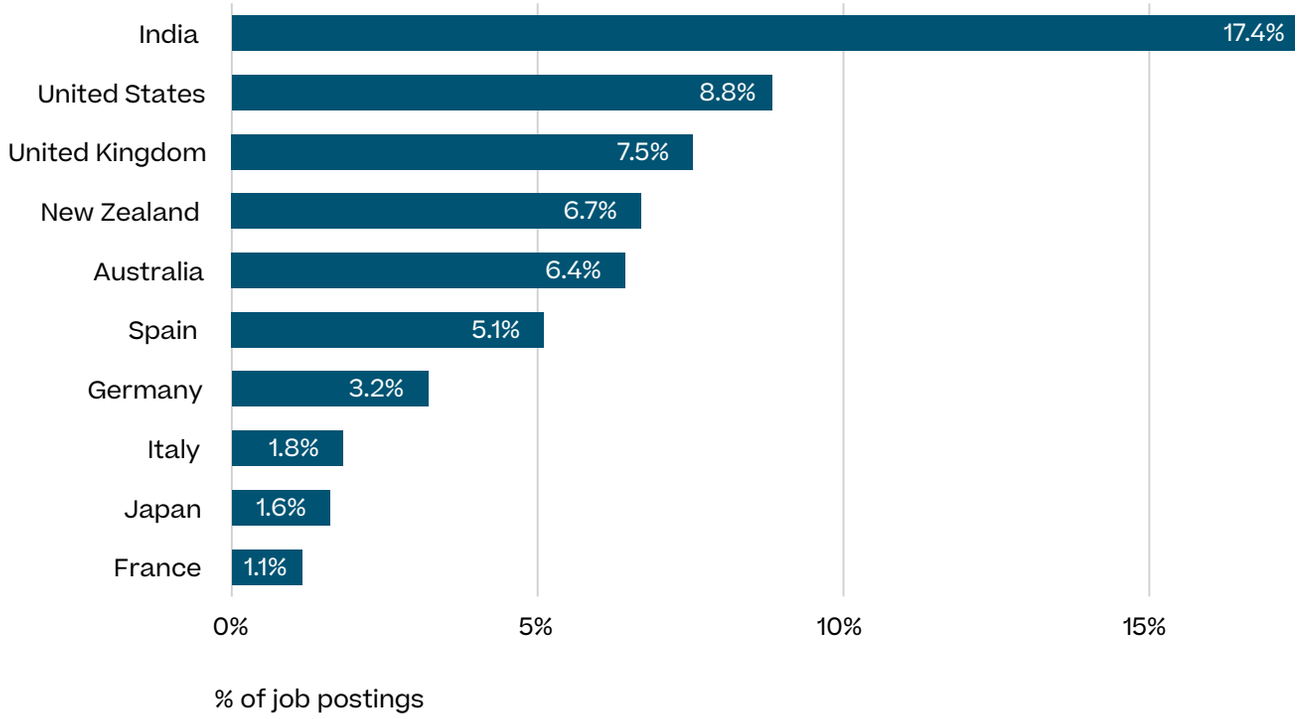



Source: SkyHive Knowledge Graph, global, 2019-2024.

# Impact of technological advancements on skills

**Rising demand for data analytics:** As the world becomes increasingly data-driven, the demand for data analytics has skyrocketed. **The share of data analytics job postings has grown by 52% over the last five years,** highlighting the critical role data plays in shaping business strategies. It's no longer just about collecting vast amounts of information; it's about transforming that data into actionable insights that power smarter decisions and streamline operations. As the demand for data analytics surges globally, the focus on these skills varies by country. **India leads with 17.4% of its job postings looking for data analytics skills,** followed by the **U.S. at 8.8%,** positioning these countries as global hubs for data analytics expertise.

## 2024 Share of Demand in Data Analytics by Country

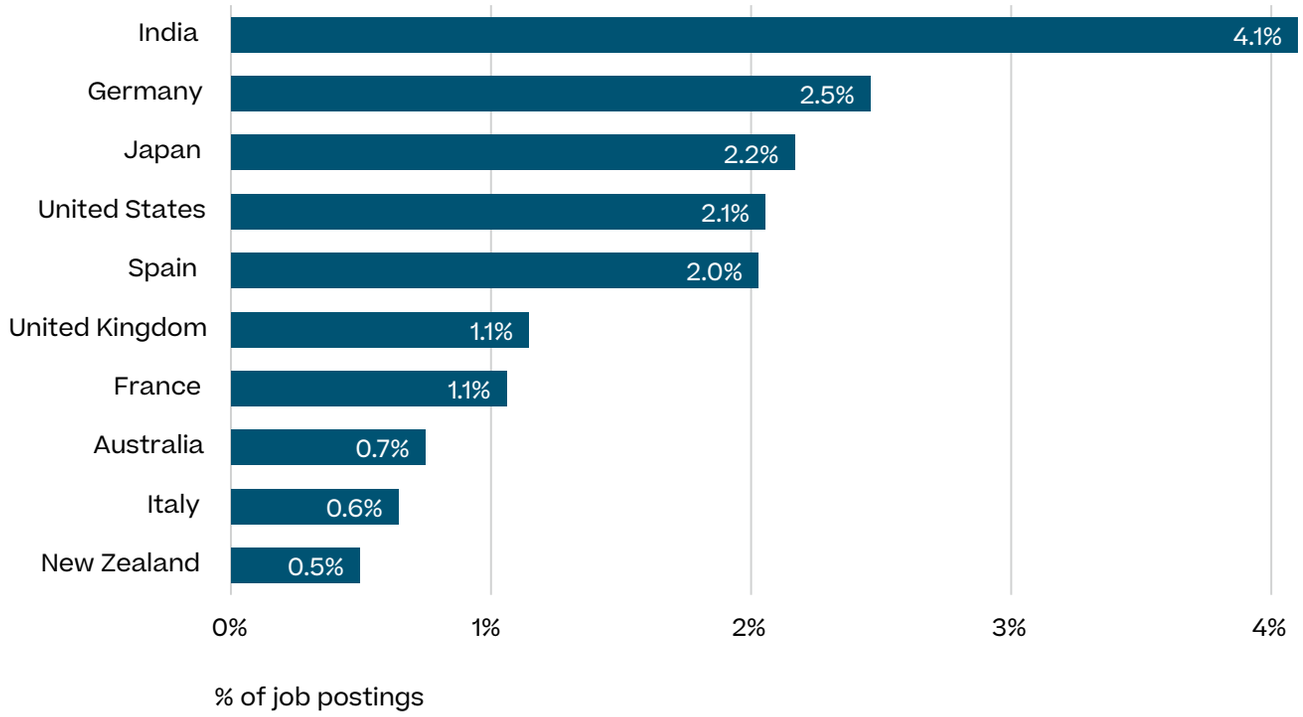



Source: SkyHive Knowledge Graph, Jan-Jul 2024.

# Impact of technological advancements on skills

**AI and machine learning: The share of AI and ML job postings has increased by 65% since 2019.** This growth might seem modest, but it is transformative. AI and ML are revolutionizing industries by automating routine tasks, enhancing decision-making, and fostering innovation. However, the smaller-than-expected growth rate may indicate challenges like high integration costs or data privacy concerns. **India leads with 4.1% of its job postings focused on AI/ML,** reflecting its growing role in the global AI landscape. **Germany and Japan follow with 2.5% and 2.2% respectively,** highlighting a strong global interest in developing AI/ML capabilities.

## 2024 Share of Demand in AI & Machine Learning by Country



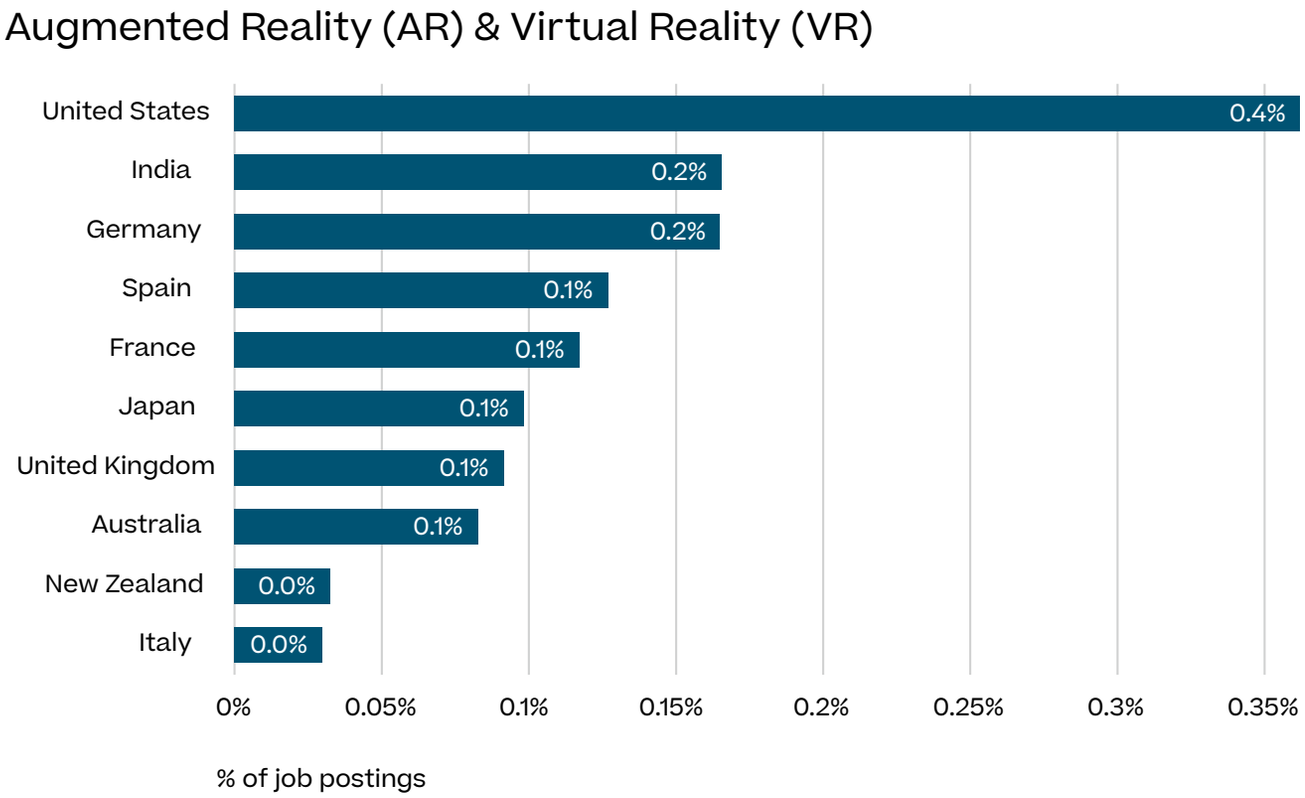

Source: SkyHive Knowledge Graph, Jan-Jul 2024.

# Impact of technological advancements on skills

**AR/VR:** Despite AR and VR roles comprising a small slice of global job postings, the **154% increase in job postings** over the past five years indicates a sector on the brink of broader adoption. This expansion reflects a strategic shift as industries explore AR/VR applications that extend beyond entertainment, expanding into training simulations, remote collaboration, and customer experience. While these roles are still emerging, the increase suggests that organizations are starting to recognize AR/VR's long-term potential to transform traditional workflows and create new business opportunities. The **US leads with 0.4% of its job postings** in this sector, followed by **Germany and India at 0.2%,** suggesting that these countries are at the forefront of recognizing and investing in AR/VR's potential.

In addition, the rapid advancement in areas such as automation, robotics, bioinformatics, and genomics drives significant skills and job growth as well.

## 2024 Share of Demand in AR & VR by Country



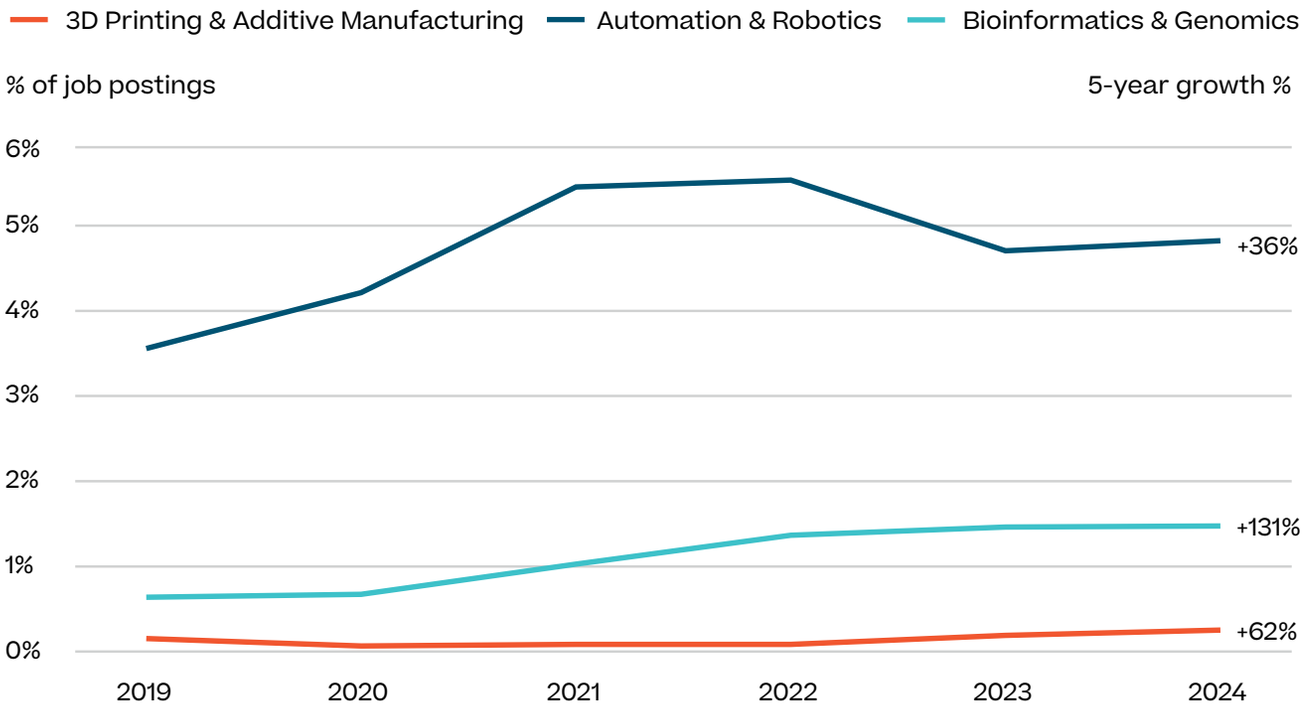

Source: SkyHive Knowledge Graph, Jan-Jul 2024.

# Impact of technological advancements on skills

**Automation and robotics: The share of automation and robotics job postings has grown 36% since 2019.** This spike, especially during the pandemic, shows automation's critical role in enhancing operational efficiency and resilience. Automation is not just about replacing human labor; it augments human capabilities and requires a strategic rethink of workforce dynamics. Leaders must integrate automation thoughtfully to enable employees to focus on higher-value tasks while also creating demand for skilled roles to manage these systems.

**Bioinformatics and Genomics: Job demand for bioinformatics and genomics has surged 131%.** This growth is not just about healthcare—it's about leveraging genetic and biological data to drive innovation and efficiency in multiple fields. Skills in precise data analysis and predictive modeling are essential for developing new products, optimizing supply chains, and enhancing customer insights. In agriculture, bioinformatics supports developing resilient crops, while environmental science helps monitor and mitigate climate change. Investing in these skills allows industries to leverage cutting-edge technology, innovate continually, and respond to future challenges.

## Global share of Demand in advanced digital tech




Source: SkyHive Knowledge Graph, global, 2019-2024.

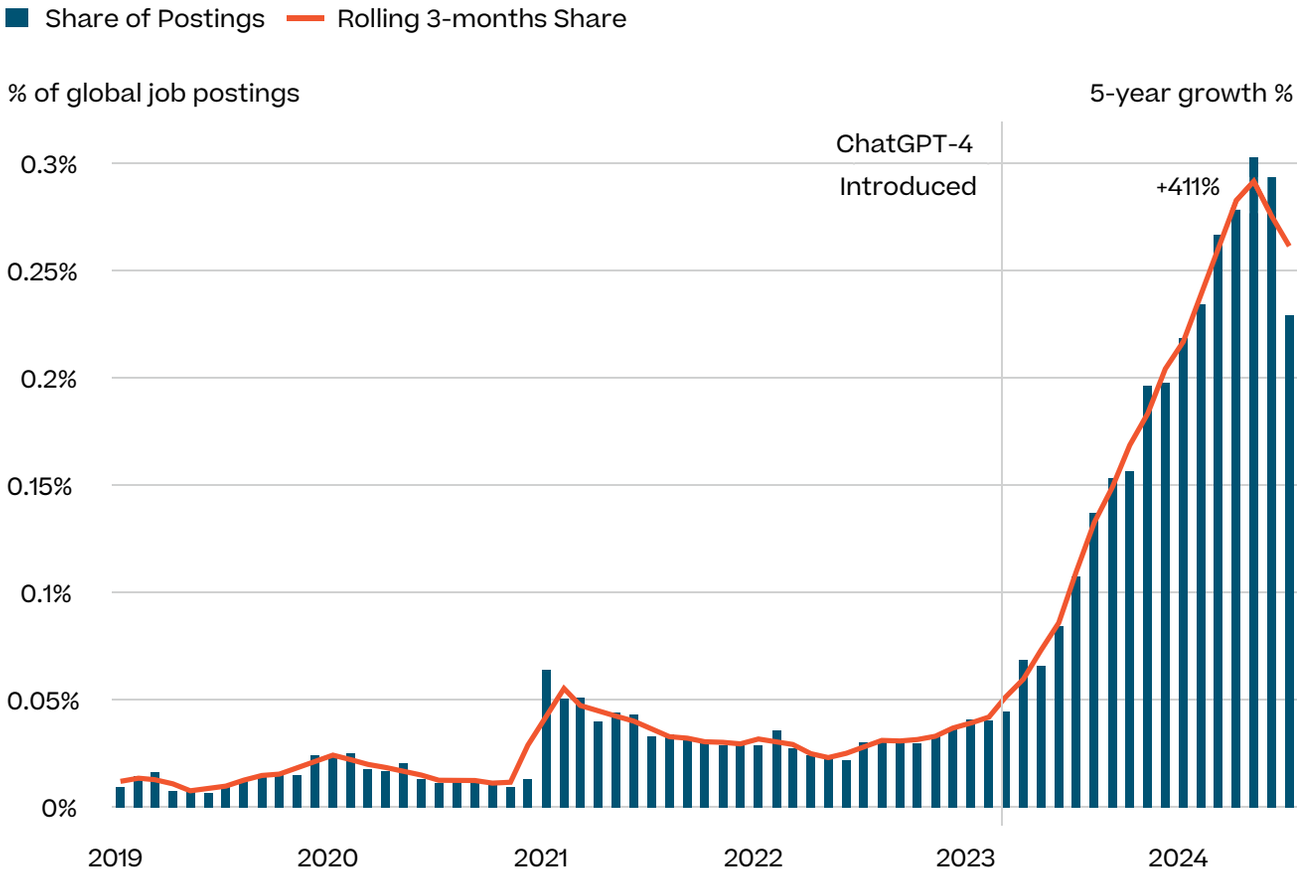
# Impact of technological advancements on skills

### Demand for GenAI skills

We've seen the growing demand – 65% – for AI and machine learning roles over the past five years. However, the explosive growth of Generative AI (GenAI) truly stands out. GenAI, a subset of artificial intelligence, warrants a closer examination. Given the creative nature of GenAI, it is revolutionizing industries by providing advanced capabilities in natural language processing, predictive analytics, and automated decision-making, transforming mundane tasks and supporting creative roles.

This graph illustrates a **411% surge in GenAI-related job postings,** particularly following the launch of ChatGPT-4 in early 2023, highlighting the growing demand for GenAI expertise. Organizations are eager to be early adopters of GenAI technology, recognizing its potential to drive innovation, streamline operations, and enhance customer experiences. This rapid adoption urgently requires a workforce skilled in AI applications. Companies must hire new talent and invest in reskilling their existing workforce to fully capitalize on these advancements.

## Global GenAI monthly online job postings

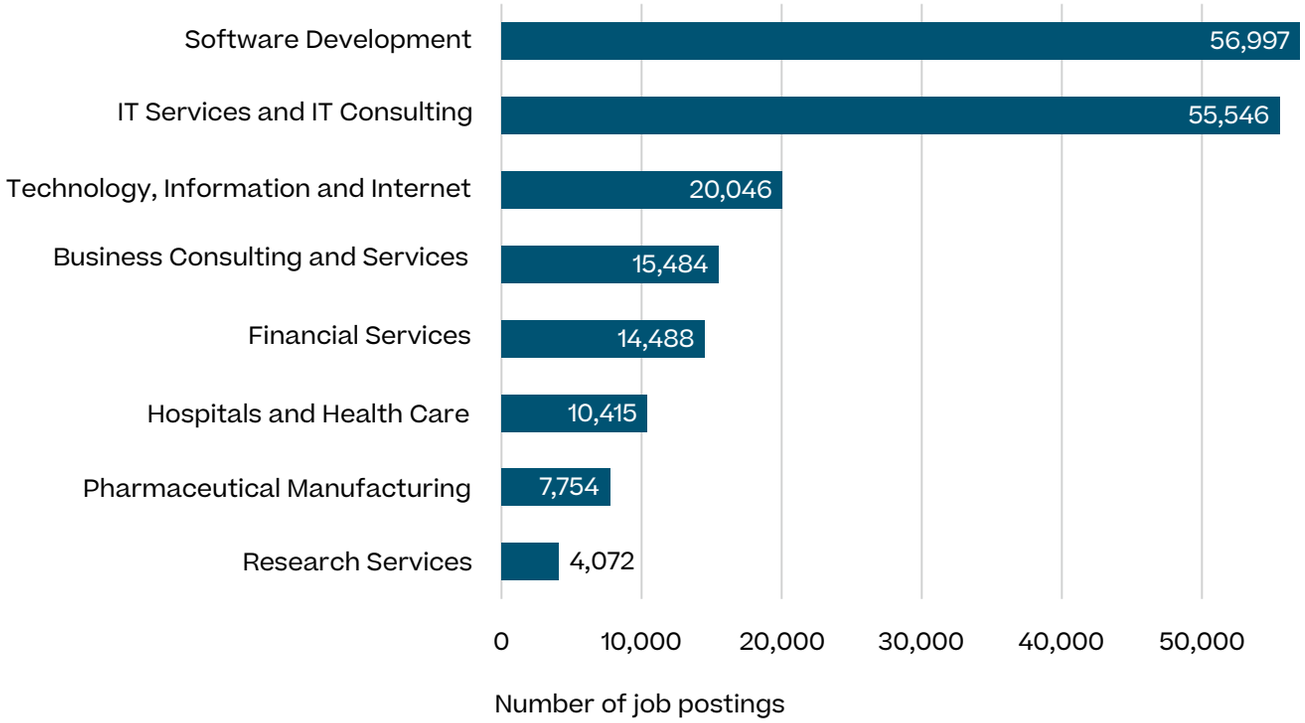



Source: SkyHive Knowledge Graph, global, 2019-2024.

# Impact of technological advancements on skills

Interestingly, the surge in demand for GenAI skills is not just a tech story. Although concentrated in industries like software development and IT consulting, we're seeing a rising demand in financial services, healthcare, pharmaceuticals, and banking. This widespread adoption highlights GenAI's versatile applications and growing importance across the entire business landscape.

## Global GenAI online job postings by industry




Source: SkyHive Knowledge Graph, global, 2019-2024.

# Impact of technological advancements on skills

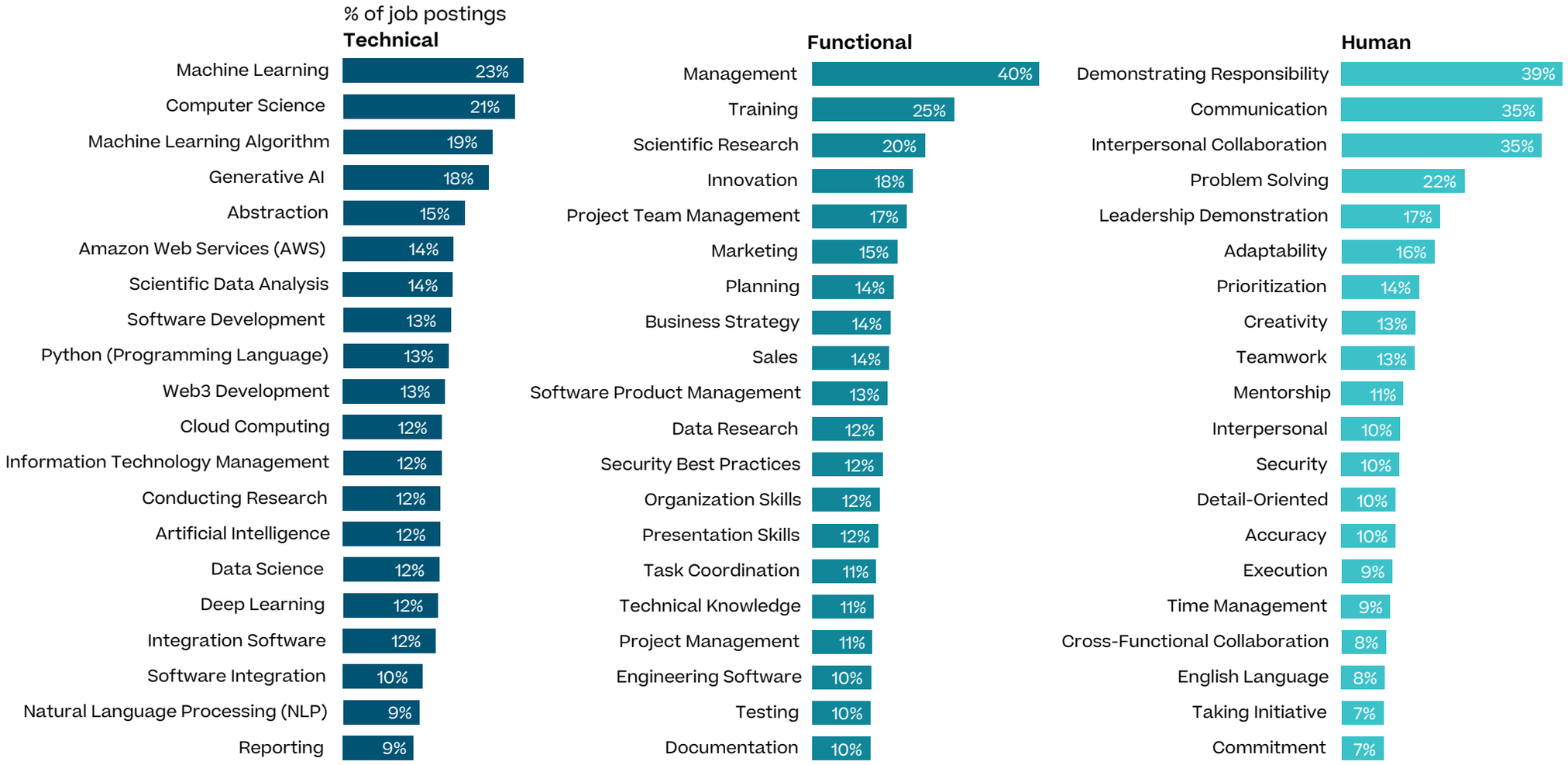
Ultimately, GenAI will augment, not replace, human labor. This distinction is crucial for organizations looking to leverage this technology, as it demands a more nuanced understanding of the diverse skill sets required to effectively integrate GenAI into your workflow. Along with technical skills like Python, Machine Learning and Cloud Computing, human skills such as collaboration, communication and creativity are equally critical. Functional skills like Business Strategy, Management and Software Product Management will also play a critical role in reaping the full potential of GenAI technologies.

It's also important to recognize that GenAI skills are not just essential for IT roles; they are increasingly relevant across various functions. GenAI is revolutionizing customer segmentation and personalized content creation by automating the analysis of vast data sets, leading to more targeted and effective campaigns. In finance, it's optimizing risk management and fraud detection through predictive analytics. In HR, GenAI is streamlining talent acquisition by automating resume screening and enhancing employee engagement with AI-driven feedback systems. This shift is about acquiring new technical skills and integrating GenAI-powered tools to support and redefine existing roles.

As GenAI redefines roles across industries, where do human skills fit in? The answer is clear—true innovation requires both. While AI makes us more efficient, it's the human qualities of leadership, creativity, and ethical judgment that turn technological potential into real-world success.

# Impact of technological advancements on skills

## Top complementary skills to GenAI




Source: SkyHive Knowledge Graph of real-time data, global, 2019-2024.

# Impact of technological advancements on skills

### Demand for human skills

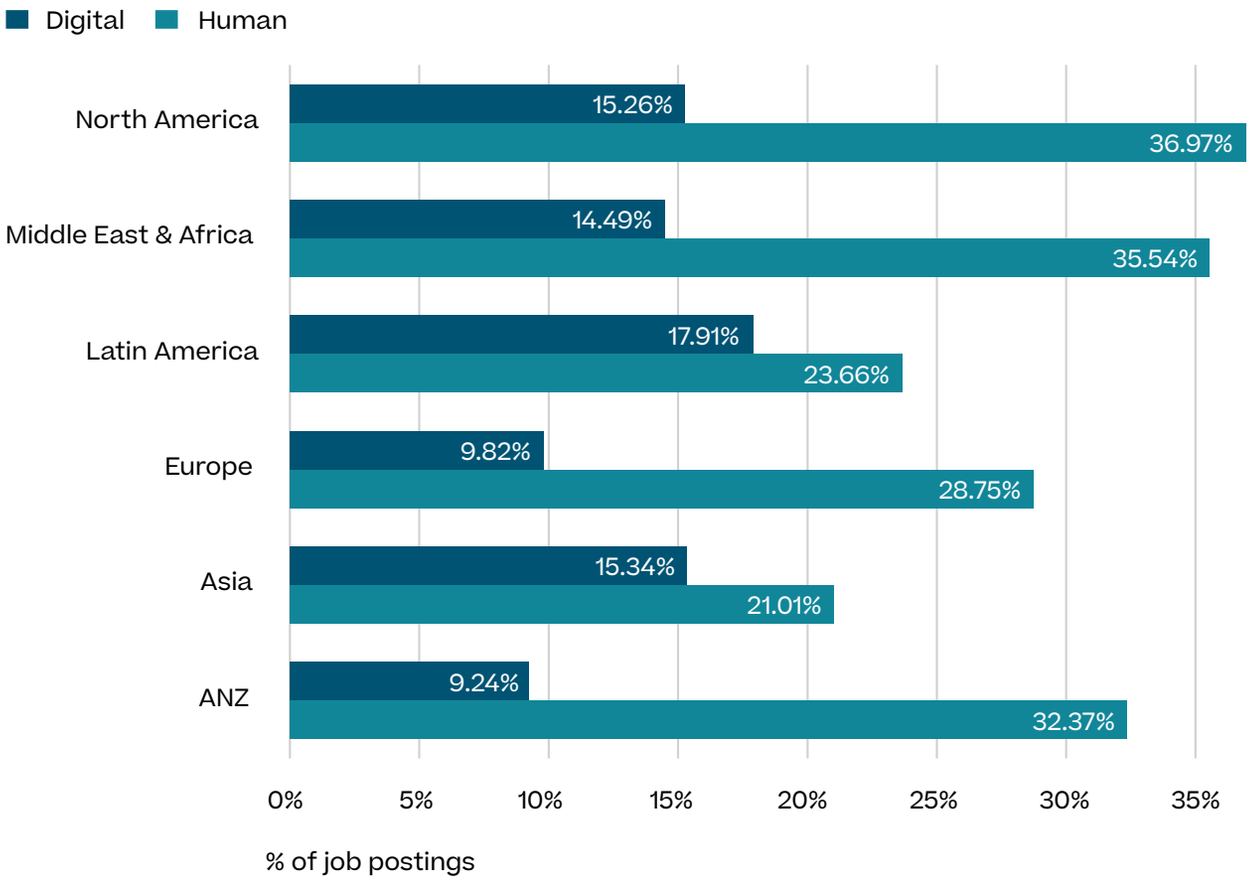
Human skills, or soft skills, such as leadership, communication, and emotional intelligence, are vital for collaboration, innovation, and managing change. The **demand for human skills consistently tops the need for digital skills** across all regions.

Despite the technological advancements and innovation over the last five years, the persistent need for human skills remains strong. Attributes such as emotional intelligence, creativity, critical thinking, and complex problem-solving complement digital skills and are crucial for roles requiring empathy, nuanced decision-making, and interpersonal communication.

Our findings clearly demonstrate that across all regions, the demand for human skills significantly surpasses the demand for digital skills. In North America, **human skills are in demand 2.4 times – and in Europe 2.9 times – more than digital skills.** This trend is evident globally, indicating a universal recognition of the value of human-centric skills.

Organizations realize that to fully maximize their investments, they need leaders who inspire, creative thinkers who innovate, and emotionally intelligent employees who connect – critical elements that foster workforce agility.

## Share of Demand for top 5 human and digital skills by region, 2023-2024




Source: SkyHive Knowledge Graph, global, 2023-2024.

# Impact of socio-economic forces on skills

Global socio-economic forces are dramatically reshaping the demand for skills in the workforce. Globalization has intensified the competition for skilled employees, pushing organizations to tap into international talent pools and raising the stakes for both employers and employees. The pressure to continuously upskill and reskill is immense — 87% of executives globally already report skill gaps in their workforce, or expect them within a few years.

Simultaneously, the rise of the gig economy is transforming traditional employment, emphasizing the importance of transferable skills and flexible work arrangements. We also see a shift towards sustainability, driving a growing demand for green skills as businesses integrate sustainable practices into their core strategies.

### Globalization and the spread of GenAI

Amidst these forces, we're seeing the globalization of GenAI, with countries like Germany and India leading in relative share of demand, even outpacing the United States. This suggests a broadening of GenAI adoption beyond traditional tech giants. While U.S. cities like Santa Clara, Redmond, and San Francisco still dominate in city-specific demand, significant demand in cities such as Bangalore, Hyderabad, and Berlin highlights a shift toward a more decentralized and global landscape. This spread of GenAI demand could not only democratize access to cutting-edge technology but also facilitate diverse perspectives and solutions. Could the future of GenAI be shaped as much by emerging tech hubs as by established giants? This decentralization might lead to more inclusive and varied advancements, driving GenAI's scope of impact and opportunity across industries.

In addition to the globalization of GenAI, we're also seeing broader shifts in how and where people work. This is reflected in the growing focus on flexibility and the gig economy, which are redefining traditional employment structures.

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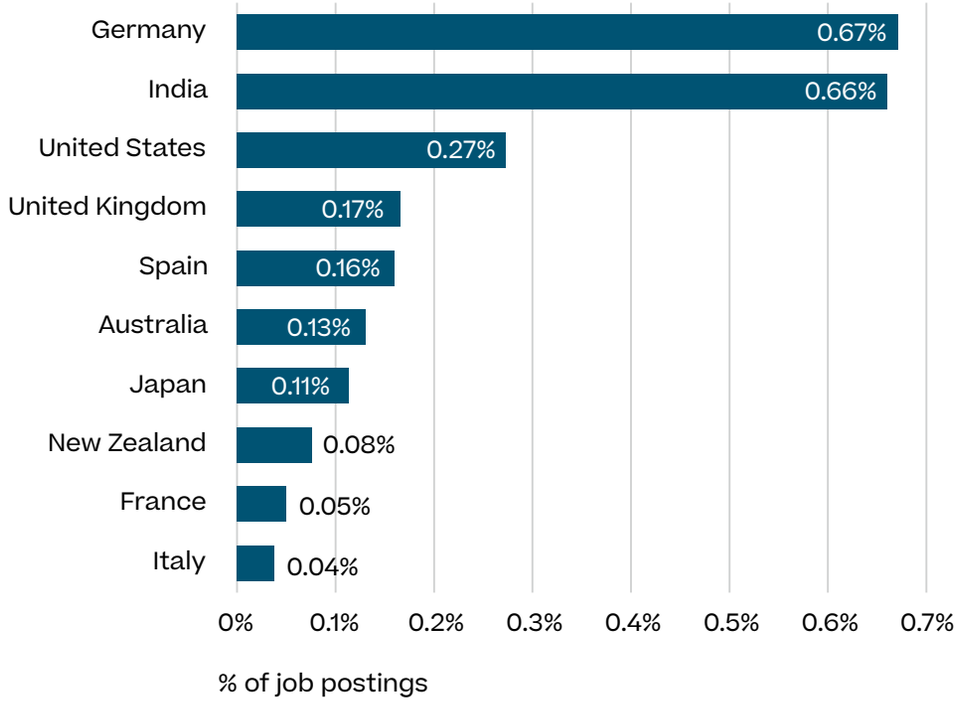
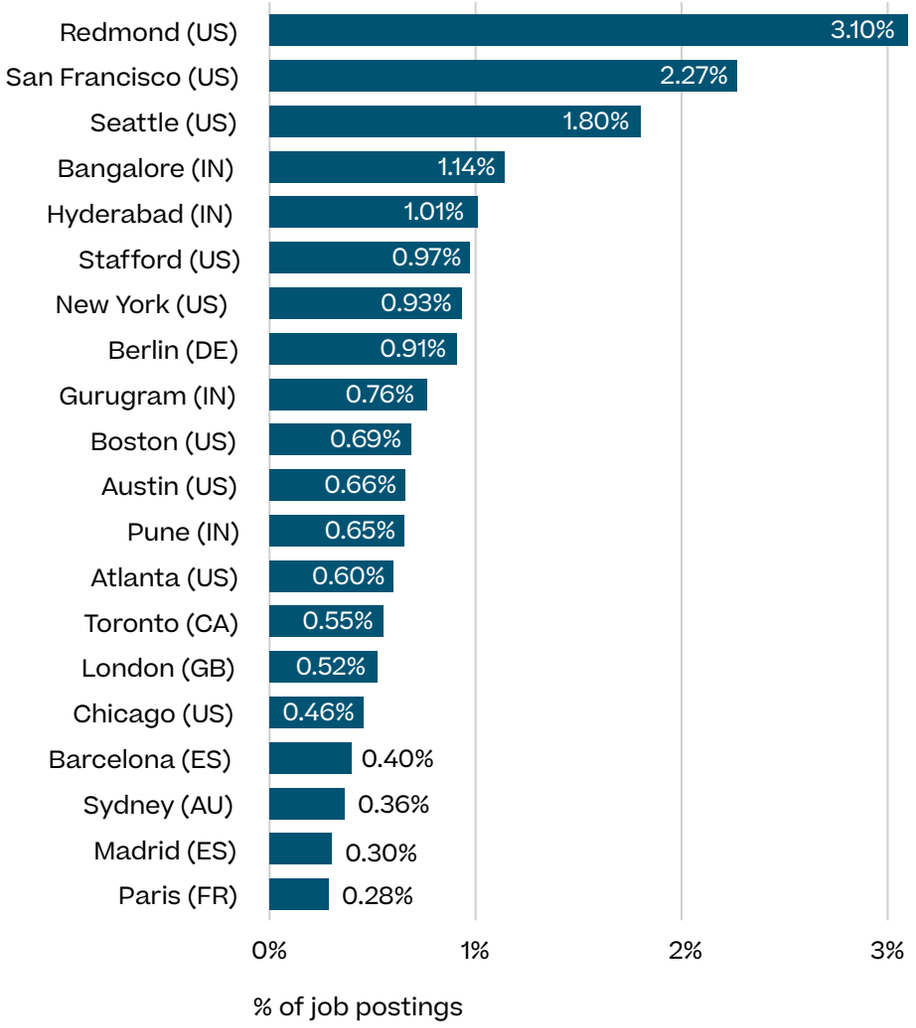
# Impact of socio-economic forces on skills

## Share of Demand for GenAI Skills by Country, 2024




## Share of Demand for GenAI Skills by City, 2024



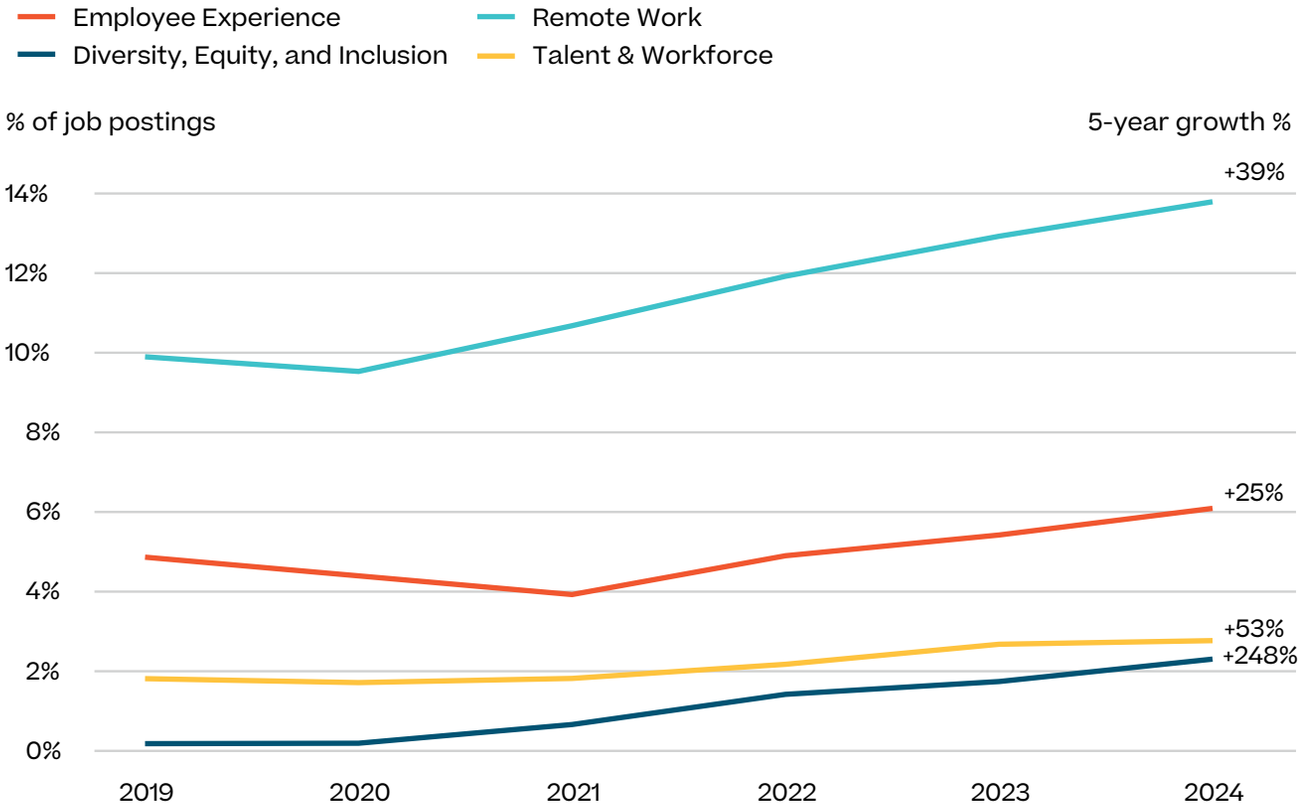

Source: SkyHive Knowledge Graph of real-time data, global, Jan-Jul 2024.

# Impact of socio-economic forces on skills

### Flexible work and the gig economy

The demand for flexible work arrangements, as illustrated in the graph, has grown significantly. **Share of demand for remote or flexible work has seen a 39% increase,** reflecting the shift in how and where people prefer to work. The desire for better work-life balance, autonomy, and the ability to work from anywhere drives this trend.

## Global share of demand in emerging work trends



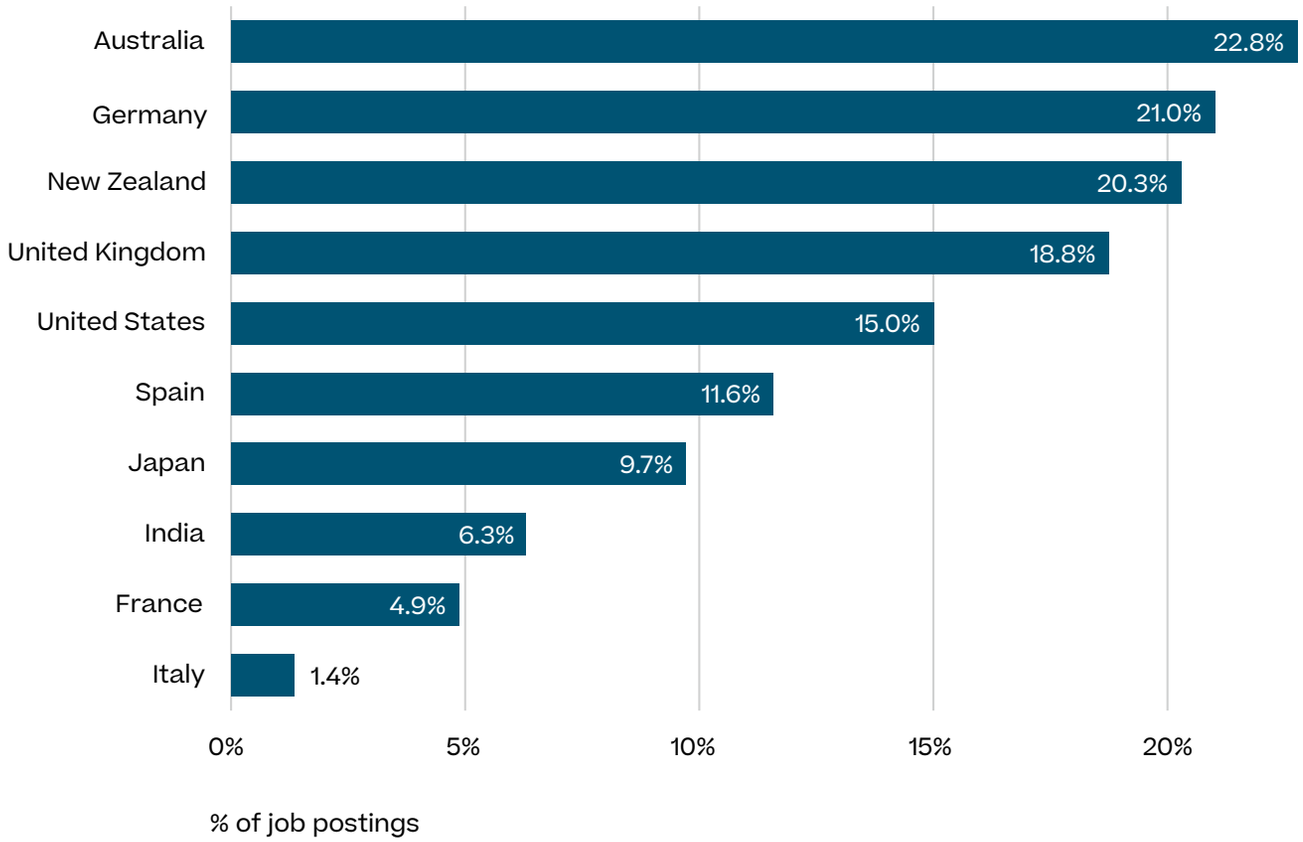

Source: SkyHive Knowledge Graph of real-time data, global, 2019-2024.

Share of demand for remote or flexible work has seen a **40% increase.**

# Impact of socio-economic forces on skills

Countries like **Australia and Germany, with 22.8% and 21% of their job postings are looking for remote or flexible workers,** show that the preference for flexibility is not just a temporary response but a sustained change in global work culture.

## Share of demand for remote and flexible workers by Country




Source: SkyHive Knowledge Graph of real-time data, Jan-Jul 2024.

Countries like Australia and Germany, with **22.8%** and **21%** of their job postings are looking for **remote or flexible workers.**

# Impact of socio-economic forces on skills

The graph (P17) also shows a **25% increase globally in the focus on employee experience** and a **248% rise in efforts to enhance talent and workforce diversity, equity, and inclusion (DEI).** These trends underscore the importance of creating a supportive and inclusive work environment that values employee well-being and diversity. **Australia leads with 11.2% of its job postings emphasizing employee experience,** while the **US takes the lead in DEI-focused roles, making up 3.7% of its total job postings,** reflecting regional differences in how organizations prioritize and communicate their commitment to these critical areas.

Australia leads with **11.2%** of its job postings emphasizing **employee experience.**

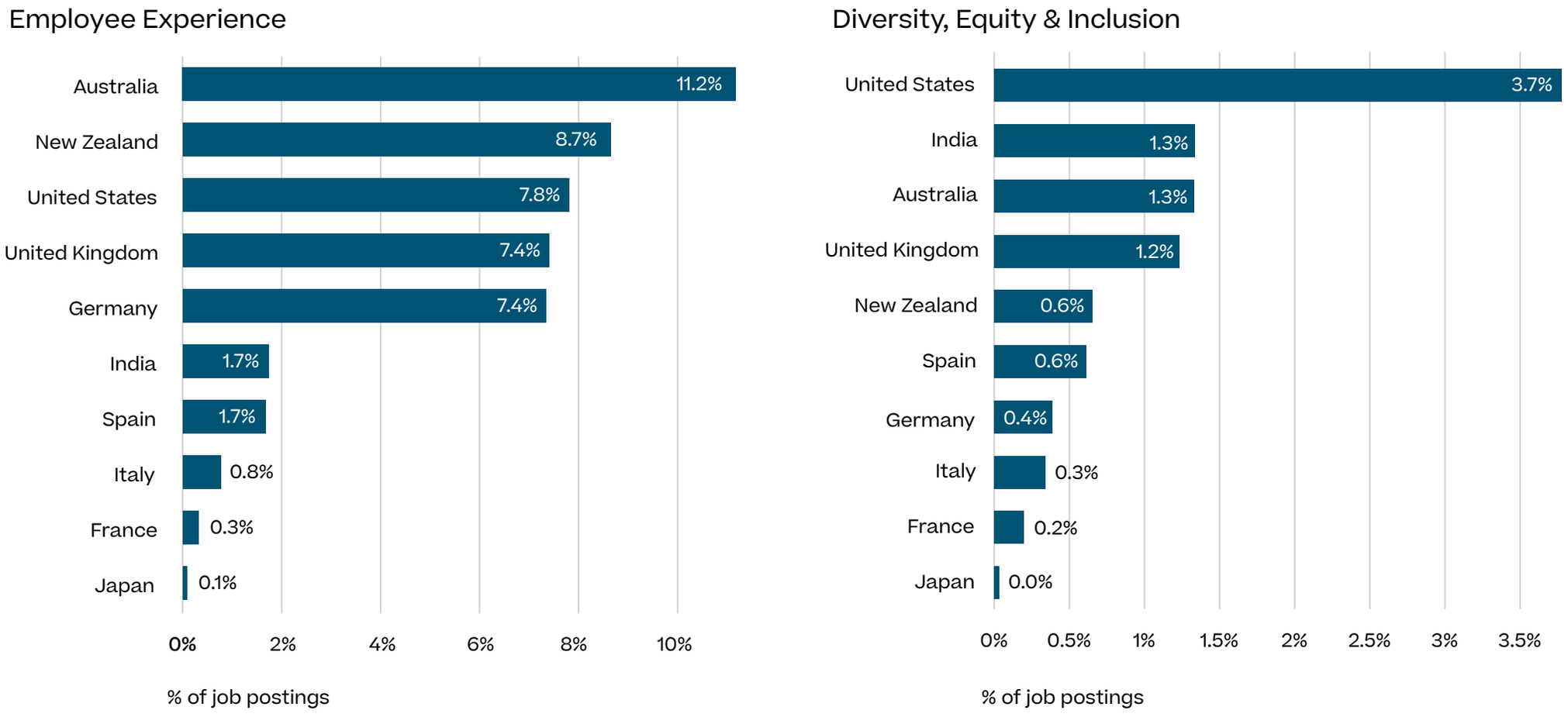
At the same time, gig and freelance work continue to transform the traditional employment landscape. Digital platforms like Instagram, TikTok, Uber and Upwork have made it easier for individuals to find flexible work opportunities. In contrast, broader generational and economic trends have made these models more attractive. Millennials and Gen Z, in particular, prioritize flexibility and work-life balance more than previous generations. Globally, there are an estimated 154 million to 435 million gig economy workers, accounting for 4.4% to 12.5% of the global workforce. This trend, which accelerated during the 2008 financial crisis and the COVID-19 pandemic, highlights how gig work is becoming an increasingly dominant force in the global economy as more people look for an alternative source of income sources and greater autonomy.

These new working models should similarly encourage business leaders to view their own workforce as a versatile pool of talent capable of adapting to different roles or internal gigs. The “Great Industry Cross-over” phenomenon illustrates this perfectly. In fields where niche skills are in short supply, companies are increasingly looking beyond their traditional talent pools and finding success. For instance, the tech industry, facing a shortage of cybersecurity experts, has started recruiting professionals from the military and other sectors with the necessary analytical and problem-solving skills. This strategy not only fills critical gaps but also fosters innovation by bringing diverse perspectives into the industry.

As organizations embrace a more flexible and mobile workforce, they’re also being called to align these new models with the growing demand for sustainability — and adopt business practices that are environmentally responsible.

# Impact of socio-economic forces on skills

## Share of job postings promoting Employee Experience & DEI by country



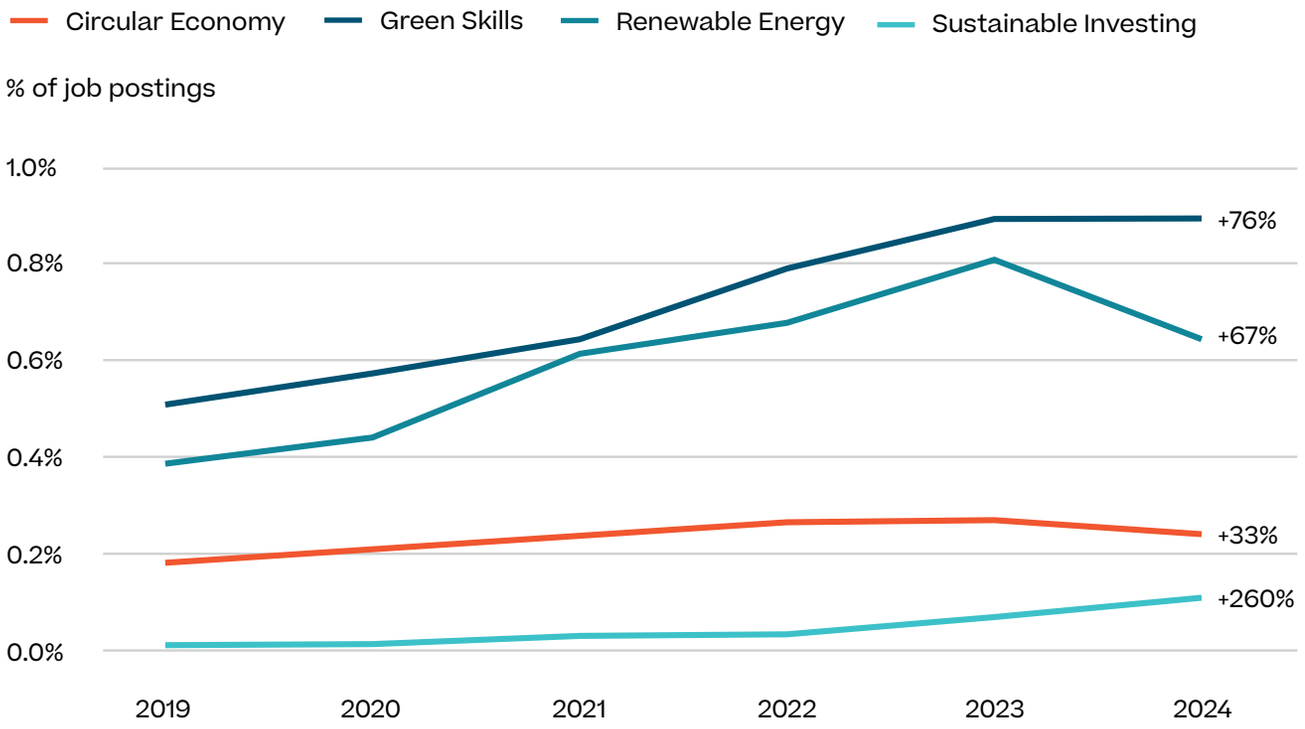

Source: SkyHive Knowledge Graph of real-time data, Jan-Jul 2024.

# Impact of socio-economic forces on skills

### Sustainability and Green Skills

The transition to a sustainable future is evident in the rising demand for green skills, as shown in the graph. Green skills refer to the general knowledge and abilities required to support environmental sustainability across multiple domains. Over the past few years, there has been a significant uptick in skills related to sustainable investing, renewable energy, circular economy, and general sustainability practices. The **share of demand for green skills overall has increased by 76%.** And while the demand is still relatively low, the growth rates are simply impossible to ignore. **Spain leads with 1.54% of its job postings looking for green skills,** followed by **New Zealand and Germany and at 1%,** reflecting the growing importance of sustainability in these regions.

## Global share of job postings in sustainability



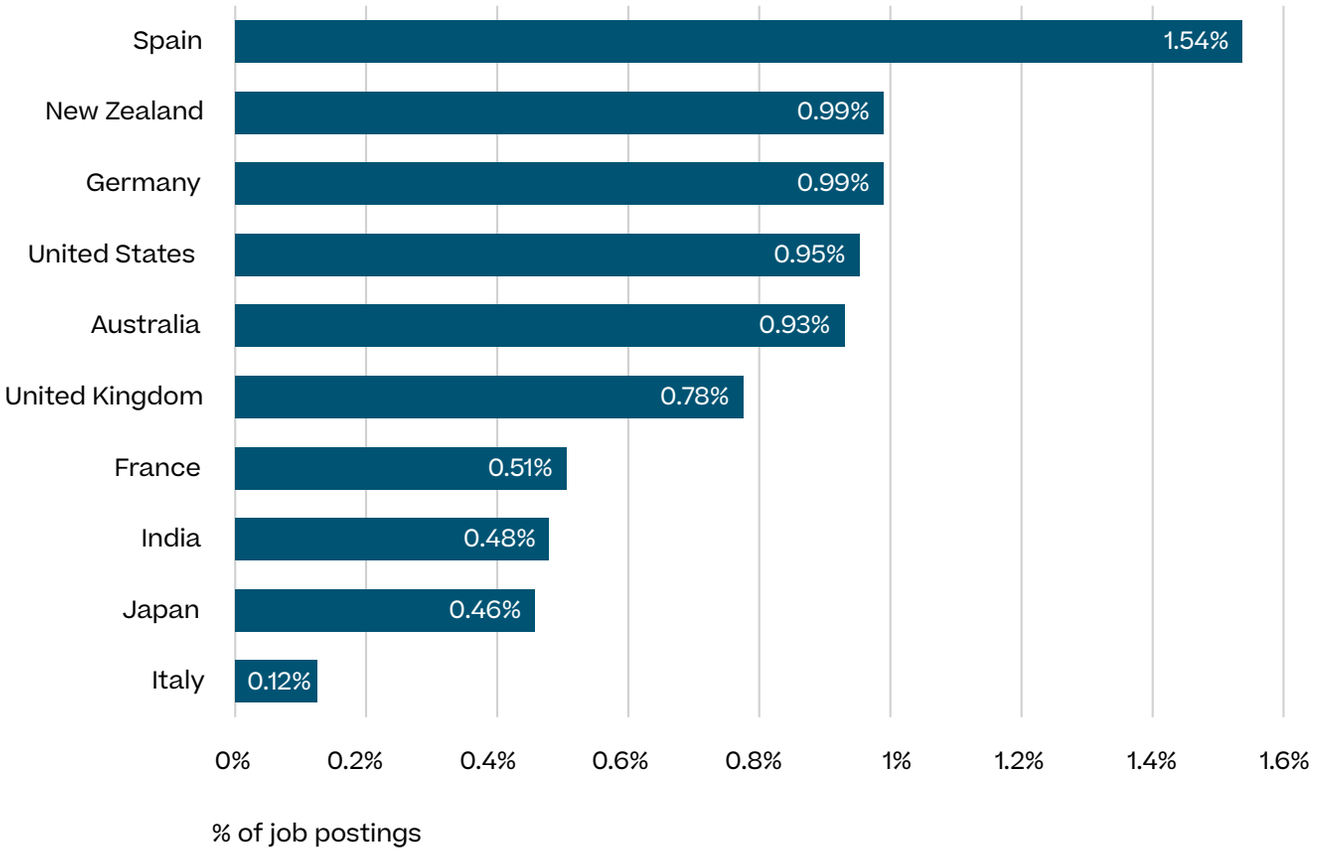

Source: SkyHive Knowledge Graph, global, 2019-2024.

# Impact of socio-economic forces on skills

In addition to general green skills, specific areas have seen remarkable growth. **Sustainable investing has seen a 260% increase since 2019,** driven by a need for improved risk management and long-term value creation — making ESG principles central to corporate strategies and business operations.

Green skills are not limited to traditional environmental roles. The **demand for expertise in renewable energy, which has grown by 67%,** highlights the shift towards clean energy solutions and the need for workers skilled in emerging technologies. Similarly, the circular economy's 33% rise emphasizes a move towards resource efficiency and innovative design. As organizations integrate these practices, the trend is clear: sustainability is becoming a core component of business strategy, requiring widespread reskilling across industries.

## 2024 Share of Demand for Green Skills by Country




Source: SkyHive Knowledge Graph, Jan-Jul 2024.

# Impact of demographics shifts on skills

For the first time in history, employers have five generations in the workforce, and as a result, the labor market is experiencing significant demographic shifts.

The “silver tsunami” of Boomers retiring and Generation Z entering the workforce is causing a decrease in overall labor force participation. Baby Boomers represent a substantial portion of the working population, and as they retire, there will be a loss of experienced workers. Although Gen Z, currently representing 13% of the workforce, is entering the job market, they are smaller in number compared to the outgoing Baby Boomers.

Gen Z’s work preferences and expectations vary considerably, often favoring flexibility and technology-driven positions. For instance, 22% of Gen Z classify as NEETs (not in employment, education or training), and a staggering 53% perform freelance work, indicating a shift away from traditional career-based roles.

## Generational skills

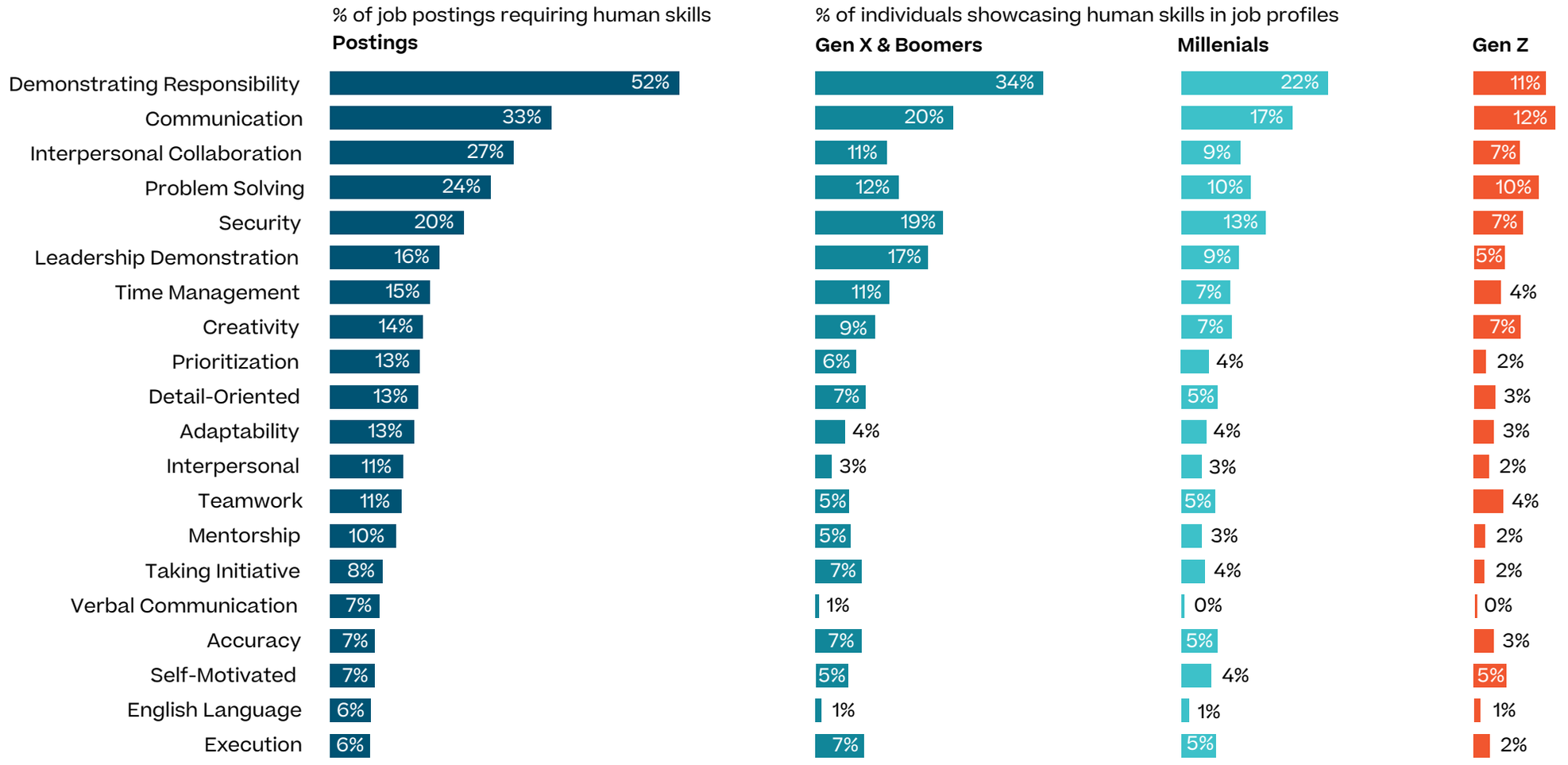
Each generation brings different expectations, experiences and skill sets to work. Baby Boomers and Gen X provide extensive experience and strategic insights but may struggle rapidly adopting new digital technologies. Millennials and Gen Z, who have grown up with technology, bring a digital-first mindset and are eager to leverage the latest technology. 80% of Gen Z aspire to work with cutting-edge tools and 91% say the technology offered by an employer would influence their job choice.

However, these younger generations often tend to struggle with human skills, including networking, conflict resolution, asking for help and communicating effectively. One explanation could be the over focus on mastering new technologies and skills to stay marketable. This continuous upskilling can sometimes overshadow the importance of developing interpersonal skills. In addition, the reliance on digital communication over face-to-face conversations and fewer opportunities for traditional mentorship in remote and hybrid work environments contribute to this challenge.

As Baby Boomers approach retirement, passing on their wealth of experience to younger generations will be crucial. Leaders must prioritize enabling these formal and informal mentoring relationships within the new working models of today’s workplace and prioritize this within the time and scope of mentor and mentee roles.

# Impact of demographics shifts on skills

## Generational Differences in Human Skills




Source: SkyHive Knowledge Graph, global, 2019-2024.

# Impact of demographics shifts on skills

**Leadership skills:** With Baby Boomers retiring, companies must develop new leaders who can effectively manage and inspire the incoming Gen Z workforce. Leadership training should focus on empathy, digital communication, and flexibility to connect with this younger, tech-savvy generation. 90% of executives believe their organizations support the development of strong leaders; however, only 68% of entry-level Gen Z employees would agree, prompting the need for leadership training to address these changes.

**Tech and AI skills:** While Millennials were once considered tech experts, the rapid pace of technological change means they must continuously update their skills. 66% of leaders would no longer hire someone without AI skills. This shift in employer preferences means Gen Z, who are more likely to possess AI expertise due to their digital upbringing, could encroach on Millennials' job opportunities. As employers prioritize AI skills, younger candidates with up-to-date knowledge in AI and automation have a competitive edge, emphasizing the necessity for continuous tech training for all generations.

**Human skills:** Gen Z has entered the workforce with remote and hybrid working models, as many started their careers during the pandemic – missing out on crucial face-to-face interactions. This situation has left them with gaps in communication, collaboration, and stakeholder management skills. Research shows that 37% of Gen Z workers worry their reliance on technology has impacted their ability to build strong interpersonal relationships. Developing these skills is harder now due to previous generations' reduced opportunities for in-person interactions. Previous generations often developed their interpersonal skills through regular and direct interactions in traditional office settings. These environments provided opportunities for spontaneous conversations, mentorship, and hands-on experiences with managing relationships and conflicts. In contrast, remote and hybrid models limit these opportunities, making it challenging for Gen Z to develop the same level of interpersonal skills.

As Baby Boomers retire, mentoring and knowledge transfer are vital. Organizations must create strategies that combine the technological proficiency of younger employees with the experience of older generations. This approach will help address skills gaps and drive innovation, ensuring business continuity and growth.

# Key takeaways

The skills economy is crucial for both performance and organizational culture. The economic benefits are clear – companies that invest in reskilling and upskilling programs can boost productivity by 6% to 12%. Staying up to date with the latest skills trends and ensuring your organization both hires and develops in-demand skills is critical to business performance, especially as skills and labor supply continue to evolve. Companies can maintain a competitive edge by actively addressing skill gaps and promoting continuous learning. Workforce agility allows greater productivity and innovation and ensures that your workforce remains resilient and future-ready in the face of demographic shifts and technological advancements.

1

### Enhance skills visibility

Improve the tracking and visibility of employees' skills within your organization. This visibility allows you to make better strategic decisions and leverage internal talent more effectively, addressing the workforce readiness gap.

2

### Prepare for technological advancements

Anticipate and prepare for the impact of AI and automation on your workforce. Invest in training programs focusing on emerging technologies to ensure your employees are ready to adapt to future demands.

3

### Adapt to demographic shifts

Develop strategies to manage the transition as Baby Boomers retire and Generation Z enters the workforce. Address the varying work preferences and expectations of different generations to maintain productivity and engagement.

4

### Leverage global talent pools

Embrace globalization by competing for and utilizing talent from around the world. Develop a workforce with a blend of technical expertise, cultural agility, and adaptability to succeed in a globalized market.

5

### Address generational skills gaps

Develop strategies to bridge generational skills gaps by fostering mentorship and knowledge transfer between experienced workers and younger employees. Tailor training programs to address the diverse expectations and skill sets of different generations within the workforce.

It is now more important than ever for organizations to proactively address these evolving skill requirements. Invest in comprehensive training programs, champion skills development, and encourage intergenerational collaboration to build a robust and agile workforce ready to thrive in the future.

## Methodology

For this report, SkyHive by Cornerstone leveraged its Knowledge Graph of more than 40 TB of data covering more than 200 countries and territories, including job postings, resumes, government data, and other data points in 11 languages. This insight, covering the top 24 countries with the highest data availability and quality from 2019-2024, provides a unique, granular view of the more than 50,000 identified skills employers want–and the skills workers claim–around the world. Please note findings may carry potential biases due to data availability and regional disparities in data collection.

## About Cornerstone

Cornerstone powers the potential of organizations and their people to thrive in a changing world. Cornerstone Galaxy, the complete AI-powered workforce agility platform, meets organizations where they are. With Galaxy, organizations can identify skills gaps and development opportunities, retain and engage top talent, and provide multimodal learning experiences to meet the diverse needs of the modern workforce. With the recent integration of SkyHive's advanced workforce intelligence, Cornerstone now offers even deeper insights and precision in skills mapping and development, enabling organizations to make data-driven decisions more effectively.

This integration enhances the ability to forecast future skill needs, optimize talent management, and accelerate workforce transformation, ensuring that companies are equipped to meet the demands of tomorrow. More than 7,000 organizations and 125 million users in 186 countries use Cornerstone Galaxy to build high-performing, future-ready organizations and people today.

**Cornerstone Galaxy, the complete AI-powered workforce agility platform, allows organizations to identify skills gaps and development opportunities, retain and engage top talent, and provide multimodal learning experiences to meet the diverse needs of the modern workforce.**

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