



GLOBAL  
LABOR MARKET  
CONFERENCE  
المؤتمر الدولي لسوق العمل

# WHITE PAPER

---

Navigating Tomorrow's Job  
Market with Digital Proficiency

## Annex:

- I. Introduction
- II. The Evolving Role of Technology in the Workforce
  - A. Impact of AI and Automation on Job Roles
  - B. The Most Important AI Replacing Jobs Statistics
  - C. The Rise of AI Demands Ethical Considerations
  - D. Why Digital Literacy Matters in Today's World
- III. Digital Skills Gap: Challenges and Opportunities

- IV. Thriving in the Digital Age: Skills by Industry
- V. Strategies for Continuous Learning
- VI. Conclusion
- VII. Sources



## Introduction

The digital revolution is transforming every industry, and the skills needed to succeed are changing rapidly. Artificial intelligence (AI) and automation are taking over routine tasks, while new roles requiring creativity, critical thinking, and digital expertise are emerging.

This white paper, from [GLMC](#), explores the evolving digital workforce and equips you with the knowledge you need to navigate the dynamic job market of tomorrow. Discover in-demand skills, identify potential challenges, and learn strategies for continuous learning to stay ahead of the curve.

### In this white paper, you will learn:

- 1 How AI and automation are impacting the job market
- 2 Essential digital literacy skills for the digital age
- 3 In-demand skills for various industries
- 4 Strategies for developing your skillset and embracing lifelong learning



## The Evolving Role of Technology in the Workforce

### A. Impact of AI and Automation on Job Roles

The rise of Artificial Intelligence (AI) is fundamentally reshaping the landscape of work. Its impact will be felt most immediately in roles centered on routine tasks and data processing, like customer service representatives and data entry clerks. AI-driven systems will streamline operations, boosting efficiency and cost-effectiveness, potentially making these positions obsolete.

However, the future of AI isn't just about automation. As AI evolves, its influence will extend to jobs requiring complex decision-making and creativity. Instead of displacing these roles, AI will become a powerful collaborator. Imagine healthcare professionals leveraging AI for faster disease diagnosis and personalized treatment plans, or lawyers utilizing AI for efficient document analysis, freeing them to focus on strategy and client interaction. AI even opens doors for innovation in traditionally creative domains. Workers in all sectors must adapt to this new landscape. By acquiring new skills and approaches that complement AI, they can elevate their work and remain valuable assets. While some studies estimate AI replacing 85 million jobs by 2025, the good news is that AI is also expected to create 97 million new positions. Interestingly, 93% of HR leaders and employees in the U.S. are receptive to AI-delivered training, highlighting the willingness to embrace this evolving future.

Here's an overview of job roles that are anticipated to be affected by AI and automation, as outlined by the World Economic Forum. In terms of decreasing demand, positions such as Data Entry Clerks, Administrative & Executive Secretaries, Accounting Clerks & Bookkeepers, Assembly & Factory Workers, and Customer Service Representatives are expected to see a decline. Conversely, there are roles projected to experience increased demand, including Data Analysts & Scientists, AI & Machine Learning Specialists, Digital Marketing & Strategy Specialists, Business Development Professionals, Project Managers, Software & Applications Developers, and Information Security Analysts.

## Decreasing Demand

Here's a look at some job roles likely to be impacted by AI and automation, according to the World Economic Forum.



Data Entry Clerks



Administrative



Executive Secretaries



Assembly & Factory Workers



Customer Service Representatives



Accounting Clerks & Bookkeepers

## Increasing Demand

Here's a look at some job roles likely to see increased demand:



Data Analysts & Scientists



AI & Machine Learning Specialists



Digital Marketing & Strategy Specialists



Business Development Professionals



Project Managers



Software & Applications Developers



Information Security Analysts

## B. The Most Important AI Replacing Jobs Statistics (Source: GITNEX MARKETDATA REPORT 202400.)

- By 2030, AI could replace 800 million jobs worldwide.
- By 2025, AI could take over 52% of jobs globally.
- By 2030, around 30% of jobs will be potentially automated.
- 42% of global job displacement due to AI adoption and automation is predicted to occur in China.
- Two-thirds of executives say they expect AI to result in moderate to significant changes in job descriptions over the next five years.
- AI could create 58 million new jobs between 2018 and 2022.
- By 2030, tasks performed by AI and humans will be split almost equally, resulting in 50% of tasks being performed by AI.
- By 2030, 6-9% of people will be employed in jobs that do not exist today, as a result of AI and automation.
- 77% of CEOs surveyed said AI and robotics technologies will lead to a net reduction in jobs.
- 57% of all jobs paying under \$20 per hour are at risk of being replaced by AI in the next two decades.

## C. The Rise of AI Demands Ethical Considerations

As the use of Artificial Intelligence (AI) becomes more common, it's essential to consider the ethical implications of its applications. Establishing clear ethical guidelines is crucial for ensuring the responsible development and utilization of AI. These guidelines should prioritize four key principles: **fairness, transparency, accountability, and the prevention of unfair influence.**

Fairness dictates that AI systems should make unbiased decisions, treating all individuals equally, which may involve using diverse data sources during development. Transparency ensures that users understand the decision-making process of AI systems, adopting trust and enabling the detection of potential issues. Accountability necessitates clear assignment of responsibility for the actions and outcomes of AI systems, raising questions about accountability in the event of errors. Preventing unfair influence requires careful selection and monitoring of training data to minimize the risk of biases influencing the system. Incorporating these ethical considerations into the development and deployment of AI technology is vital to ensuring its ethical and responsible use.

## D. Why Digital Literacy Matters in Today's World

Imagine navigating the difficulties of life without a map in a bustling city. That's similar to the challenge of operating in today's digital world without digital literacy. Digital literacy covers more than mere computer skills; it's about possessing the ability to discern reliable sources while navigating the internet, safeguard personal data akin to locking one's door, communicate effectively across digital platforms, and employ problem-solving skills when troubleshooting technical glitches or seeking solutions online. Embracing digital literacy offers numerous advantages, such as broadening job prospects, facilitating lifelong learning, and fostering empowerment. However, digital exclusion remains a significant challenge, with over **2.9 billion individuals worldwide digitally excluded**, predominantly in developing nations, often due to economic constraints or inadequate infrastructure. This digital divide inhibits access to employment opportunities, education, and vital services.

### 1 Find reliable information online

No more getting fooled by fake news! Digital literacy helps you identify trustworthy sources.

### 2 Protect yourself online

Just like locking your door, digital literacy teaches you how to keep your personal information safe.

### 3 Communicate effectively

Whether it's sending professional emails or connecting on social media, digital literacy ensures you're clear and understood.

### 4 Solve problems

From troubleshooting tech issues to finding solutions online, digital literacy empowers you to overcome challenges.

## The Benefits of Being Digitally Literate:



## The Challenge of Digital Exclusion:

Not everyone is embracing digital advancements. According to Eurostat, **46% of individuals aged 16 to 74 in the EU lacked basic digital skills in 2021.**

A report from the United States Department of Education in 2018 revealed that **23% of adults in OECD countries were not digitally literate.** Highlighting the extent, the International Telecommunication Union (ITU) reported that **2.9 billion people remained offline in 2021, with an estimated 96% residing in developing nations.** While elderly individuals are often cited as digital outsiders, this issue also affects residents of smaller towns with limited tech exposure and those facing economic disadvantages.

And here are some more startling facts:

**OVER 2.9 billion**

people worldwide are digitally excluded, mostly in developing countries. Many lack access due to cost-of-living issues or lack of infrastructure

**The Digital Divide**

can limit job opportunities, education, and essential services.

## Investing in Digital Literacy:

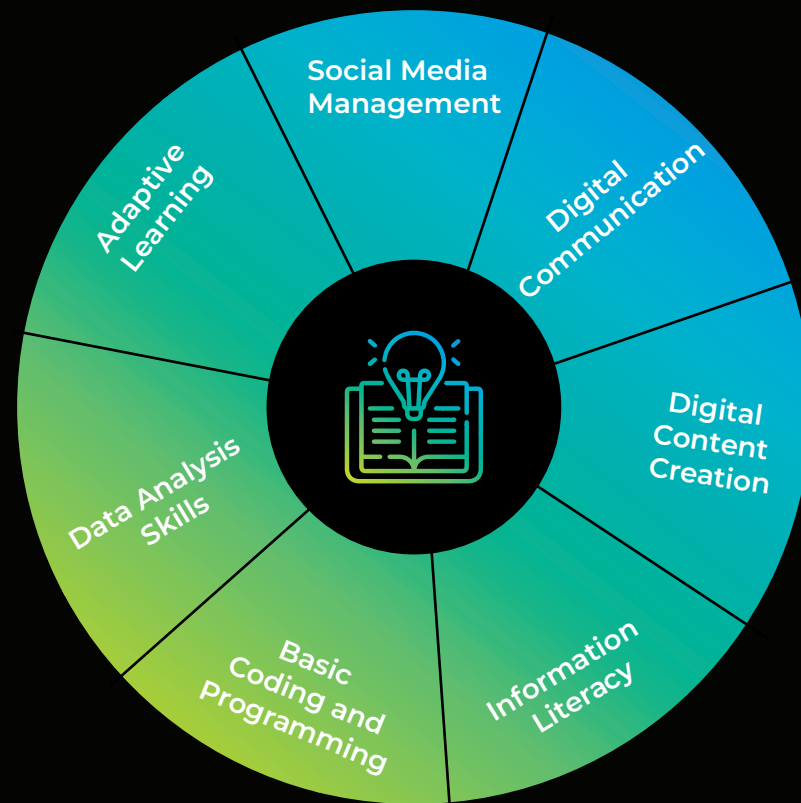
**The good news:** millions are being trained in digital skills globally. Initiatives are closing the digital gap and empowering individuals.

### Here are some key findings:

- Higher digital skills are linked to better job opportunities, financial well-being, and access to crucial services.
- Young people are embracing the digital world, but there's still a gap in recognizing online advertising.

Digital literacy encompasses a broad spectrum of skills beyond critical thinking, information evaluation, and online safety. Expanding your digital toolkit involves mastering various areas, such as Social Media Management, where understanding privacy settings, managing online presence, and fostering positive communication are crucial. Effective online collaboration requires proficiency in Digital Communication, including professional email etiquette, video conferencing, and utilization of messaging platforms like Slack or Microsoft Teams.

Enhancing communication and storytelling abilities can be achieved through Digital Content Creation, which involves creating and editing digital content such as presentations or social media posts. Additionally, Information Literacy ensures responsible use and sharing of information online by understanding copyright laws and ethical considerations. Basic Coding and Programming skills can aid in customizing personal websites or apps, while Data Analysis Skills enable informed decision-making based on evidence. Given the ever-evolving digital landscape, Adaptive Learning is essential, fostering an openness to learning new technologies to stay relevant and seize future opportunities.



● **Social Media Management**

Leveraging social media responsibly includes understanding privacy settings, managing your online presence, and fostering positive communication.

● **Digital Communication**

Mastering professional email etiquette, video conferencing skills, and using appropriate messaging platforms are crucial for effective online collaboration.

● **Digital Content Creation**

Knowing how to create and edit basic digital content, such as presentations or social media posts, can enhance your communication and storytelling abilities.

● **Information Literacy**

Understanding copyright laws and ethical considerations ensures you use and share information responsibly online.

● **Basic Coding and Programming**

Familiarity with basic coding can be surprisingly helpful in customizing personal websites or apps to your needs.

● **Data Analysis Skills**

Learning to interpret and analyze data allows you to make informed decisions based on evidence, a valuable skill in any field.

● **Adaptive Learning**

The digital landscape constantly evolves. An openness to learning new technologies will keep your skills relevant and position you for future opportunities.

**E. Adapting to Technological Changes in the Workplace**

In today's rapidly evolving digital landscape, aiding employees in adapting to new technology is essential for organizational success. To facilitate seamless integration, consider revamping training methods to create engaging learning experiences, using interactive modules and simulations.

Foster a supportive culture where experimentation is encouraged, drawing inspiration from innovative companies like Google and 3M. Conduct regular skills assessments to identify gaps and ensure employees are equipped to handle technological advancements, adapting tools like LinkedIn Learning Insights or Skillsoft's SkillPort. Offer incentives paired with expert guidance to motivate and support employees, leveraging programs like Microsoft's Imagine Academy.

Ensure transparency by clearly communicating technological changes through various channels such as company-wide emails or digital signage.

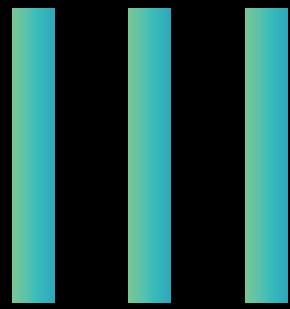
Provide a variety of training formats to cater to diverse learning preferences, including in-person workshops and self-paced online courses via platforms like Udemy or Skillshare.

You can also empower employees with self-directed learning resources for autonomy, such as access to online libraries like Safari Books Online or Pluralsight. Cultivating adaptability skills to navigate technological shifts effortlessly is also essential, while adapting resources like Harvard Business Review's Adaptive Learning Toolkit.

Mentorship programs to foster knowledge exchange and support, pairing seasoned employees with those seeking guidance is also essential.

Lastly, you can encourage technology advocacy through recognition and rewards, drawing inspiration from programs like Salesforce's Innovation Awards.

- Foster a supportive culture
- Conduct regular skills assessments
- Offer incentives
- Ensure transparency
- Provide diverse training formats
- Empower employees with learning resources
- Cultivate adaptability skills
- Establish mentorship programs
- Encourage technology advocacy through recognition and rewards



## Digital Skills Gap: Challenges and Opportunities

Despite the growing importance of digital skills, a gap exists between current skillsets and industry needs.

The Wiley Digital Skills Gap Survey, focusing on APEC economies, reveals several challenges delaying efforts to address this gap. Inadequate government support and policy leadership, particularly evident in developing Southeast Asian economies, hinder progress. Additionally, under-resourced education systems struggle to keep pace with evolving skill requirements. Moreover, there is resistance to upskilling and reskilling among both workers and companies, who may be hesitant to invest in acquiring new skills.

Identified as critical for the next five years, skills fall into three main categories: 21st Century Skills involving problem-solving, dynamic self-reskilling, decision-making, working with technology, and customer focus; Technical Skills which include data analytics & algorithms, computing, data science engineering principles, statistical techniques, and research methods; and Business and Organizational Skills covering operational analytics, data management & governance, data visualization & presentation, and domain knowledge & application.

Certain sectors exhibit wider skills gaps, such as Education & Training (45.6%), Public Administration (42.5%), and Health Care & Social Assistance (41.3%), while others show narrower gaps, such as Transportation & Warehousing (12.0%), Information & Publishing (10.8%), and Finance & Insurance (10.0%).

Addressing the digital skills gap necessitates strong government initiatives to promote digital literacy and upskilling programs, renovation of education systems to equip future generations with necessary digital skills, employer-driven training to maintain competitiveness, and individual commitment to continuous learning to keep digital skills relevant in the evolving job market.

## Challenges:

- 1 Inadequate government support and policy leadership
- 2 Weak education systems
- 3 Resistance to upskilling and reskilling



## Skills in Highest Demand (Next 5 Years):

The Wiley Digital Skills Gap Survey categorizes these skills into three key areas:

### 21st Century Skills

- ✓ Problem-solving
- ✓ dynamic self-reskilling
- ✓ decision-making
- ✓ working with technology
- ✓ customer focus.

### Technical Skills

- ✓ Data analytics & algorithms
- ✓ computing
- ✓ data science
- ✓ engineering principles
- ✓ statistical techniques
- ✓ research methods.

### Business and Organizational Skills

- ✓ Operational analytics
- ✓ data management & governance
- ✓ data visualization & presentation
- ✓ domain knowledge & application.



## Sectors with the Widest Skills Gap:

**45.6%**

Education & Training

**42.5%**

Public Administration

**41.3%**

Health Care & Social Assistance

## Sectors with the Narrowest Skills Gap:

**12.0%**

Transportation & Warehousing

**10.8%**

Information & Publishing

**10.0%**

Finance & Insurance

Closing the digital skills gap requires a multi-pronged approach:

- Government initiatives
- Education system overhaul
- Employer-driven training
- Individual commitment

**Source:** The Wiley Digital Skills Gap Survey

# IV

## Thriving in the Digital Age: Skills by Industry

Amid the digital revolution, adapting to new skill sets is necessary across industries to thrive in today's rapidly evolving landscape. In the Tech Sector, proficiency in Coding & Software Development, such as Python, Java, and JavaScript, is vital for building digital solutions and exploring fields like data analysis and AI. Tools like Codecademy, Udacity, or freeCodeCamp offer tutorials and bootcamps to enhance coding skills. Cloud Computing expertise, including platforms like AWS (Amazon Web Services), Azure (Microsoft), or GCP (Google Cloud Platform), enables individuals to manage cloud-based applications for scalability and security. Platforms like AWS Training and Certification or Coursera provide online courses and hands-on labs to gain proficiency in cloud computing.

In the Healthcare Sector, mastering Telemedicine & Remote Monitoring involves using telehealth platforms like Doxy.me or Zoom for virtual consultations and patient monitoring. Developing strong communication skills and data privacy expertise can be achieved through training programs offered by organizations like the American Telemedicine Association. Health Informatics & EMR (Electronic Medical Records) Management requires analyzing data from electronic medical records, and platforms like IBM Watson Health or Epic Systems offer education programs and certifications in health informatics.

In the Finance Sector, skills in Financial Data Analysis & Modeling are essential for analyzing financial data and understanding industry trends. Tools like Excel, Tableau, or Python libraries like Pandas and NumPy are commonly used for financial analysis and modeling.

Understanding Blockchain & Cryptocurrency requires navigating the cryptocurrency landscape and comprehending blockchain technology and regulations.

Resources like Blockchain.com or Coinbase offer educational materials and platforms for learning about blockchain and cryptocurrencies.

As for the Education Sector, proficiency in Online Teaching Platforms like Moodle, Canvas, or Google Classroom is vital for instructional design, content creation, and effective communication. Platforms like Coursera for Campus or LinkedIn Learning provide specialized courses and workshops to sharpen skills in online teaching. Educational Technology Integration involves integrating technology into teaching through tools like Flipgrid, Kahoot, or Nearpod for interactive lessons and assessments. Workshops, graduate studies, and collaboration initiatives with educational technology experts facilitate expertise in this area.

**Speaking of the Manufacturing Sector, expertise in Industrial IoT (Internet of Things) Implementation enables individuals to design solutions, optimize processes, and ensure safety using sensor technology, data analytics, and system integration. Tools like Siemens MindSphere or Microsoft Azure IoT offer platforms and resources for industrial IoT development and implementation. Proficiency in Robotics & Automation involves programming robots, designing mechanics, and integrating AI for automation tasks across various industries. Academic programs, online courses, and hands-on projects provided by institutions like Udacity or ROS (Robot Operating System) offer opportunities to learn robotics and automation skills.**

And in Human Resources, mastering Tech-driven Recruitment involves leveraging technology for efficient candidate screening while maintaining a personalized applicant experience through human interaction. Applicant Tracking Systems (ATS) like Workday or Greenhouse automate recruitment processes, while platforms like LinkedIn or Indeed facilitate candidate sourcing and networking. These skills can be acquired through a variety of methods, including online courses, workshops, and practical experience in HR technology platforms.

The digital revolution demands new skillsets across industries. Here's what you need to know to thrive.



### Tech Sector:

**Coding & Software Development (Python, Java, JavaScript):** Build digital solutions, explore data analysis and AI. (Learn through tutorials, bootcamps, or education.)

**Cloud Computing (AWS, Azure, GCP):** Manage cloud-based applications for scalability and security. (Gain proficiency through online courses and hands-on labs.)



### Healthcare Sector:

**Telemedicine & Remote Monitoring:** Master telehealth platforms for virtual consultations and patient monitoring. (Develop strong communication skills and data privacy expertise through training programs.)

**Health Informatics & EMR Management:** Analyze data from electronic medical records to enhance healthcare delivery and patient care. (Gain skills through education programs and certifications.)



### Finance Sector:

**Financial Data Analysis & Modeling:** Analyze financial data, develop models, and understand industry trends to stay competitive.

**Blockchain & Cryptocurrency:** Navigate the cryptocurrency landscape by understanding blockchain technology, smart contracts, and regulations.



### Manufacturing Sector:

**Industrial IoT Implementation:** Design solutions, optimize processes, and boost safety using sensor technology, data analytics, and system integration. (Gain skills through courses, certifications, and collaboration.)

**Robotics & Automation:** Program robots, design mechanics, and integrate AI for automation tasks in various industries. (Learn through academic programs, online courses, and hands-on projects.)



### Education Sector:

**Online Teaching Platforms:** Master online learning platforms for instructional design, content creation, and effective communication. (Sharpen skills through specialized courses and workshops.)

**Educational Technology Integration:** Integrate technology into teaching by selecting tools, crafting curriculum, and providing professional development. (Build expertise through workshops, graduate studies, and collaboration.)



### Human Resources:

**Tech-driven Recruitment:** Leverage technology for efficient candidate screening while maintaining a personalized applicant experience through human interaction.



## Strategies for Continuous Learning

Formal education and training play a crucial role in acquiring industry-specific expertise and closing skill gaps. This can be achieved through traditional university programs, vocational training institutes, or online platforms like Coursera or Udemy. Online learning platforms and Massive Open Online Courses (MOOCs) provide flexibility, enabling individuals to learn at their own pace and collaborate globally using tools such as edX, Khan Academy, or LinkedIn Learning. Professional certifications, such as those offered by Microsoft or Cisco, serve as tangible proof of expertise in specific fields, opening doors to new career opportunities. Mentorship programs, whether through formal arrangements or networking events like industry conferences or professional associations, offer valuable guidance and opportunities for career advancement through knowledge sharing and networking using platforms such as MentorCruise or Meetup.

Stay ahead of the curve in the digital age:



### Formal Education & Training:

Gain industry-specific expertise through programs that boost employability and bridge the skills gap.



### Online Learning & MOOCs:

Learn at your own pace with flexible online platforms, fostering global collaboration and continuous skill development.



### Professional Certifications:

Showcase your expertise with industry-recognized certifications, opening doors to new career opportunities.



### Mentorship & Networking:

Gain valuable guidance from mentors and build a strong network for knowledge sharing, new opportunities, and career advancement.

## Conclusion

As governments and businesses grapple with the rapidly evolving digital landscape, the provision of online courses and technological resources alone falls short. Genuine technological literacy necessitates equitable access to fundamental digital tools and devices, particularly among marginalized communities, a principle accentuated by initiatives such as “Internet for All.”

Upon achieving extensive digital accessibility, further measures must be taken. Major corporations, particularly those driving AI development, should try to explain their technologies in easily understandable terms. Concurrently, governmental bodies should prioritize the establishment of fair and comprehensible regulations governing AI utilization.

In our contemporary digital milieu, it is necessary to ensure inclusivity. Lifelong learning, characterized by a commitment to continuous skill development, is crucial for individuals and organizations alike. As technological advancements reshape occupational landscapes, ongoing skill acquisition becomes a need for maintaining competitiveness. For enterprises, embracing a culture of continual learning fosters innovation, creativity, and adaptability.

Looking ahead, lifelong learning will play a pivotal role in shaping the future of work in the digital era. It represents a pathway to navigating uncertainties, generating novel ideas, and remaining responsive in a continually evolving environment. What role do you envision lifelong learning playing in the digital era’s occupational landscape?

## Sources

- Technology's Evolving Role in Today's Workplace (2023, April 25). Forbes. Forbes Technology Council: <https://www.forbes.com/sites/forbestechcouncil/2023/04/25/technologys-evolving-role-in-todays-workplace/?sh=52542abb35df>
- Future of Work: The Impact of AI on Jobs and Skills (n.d.). Redress Compliance. Redress: <https://redresscompliance.com/future-of-work-the-impact-of-ai-on-jobs-and-skills/>
- Technology in the Workplace: Advantages and Evolution (n.d.). Reed. <https://www.reed.com/articles/technology-in-the-workplace-advantages-evolution>
- Building Foundations for Digital Literacy (2023, May 10). The Asean Magazine. <https://theaseanmagazine.asean.org/article/building-foundations-for-digital-literacy/#:~:text=Digital%20literacy%20enables%20individuals%20to,elevate%20its%20citizens'%20digital%20competence>
- 13 Practical Ways to Help Employees Adapt to New Technology (2021, February 22). Forbes. Forbes Human Resources Council: <https://www.forbes.com/sites/forbeshumanresourcescouncil/2021/02/22/13-practical-ways-to-help-employees-adapt-to-new-technology/?sh=690a36646ab0>
- AI Replacing Jobs Statistics (n.d.). GitNux. <https://gitnux.org/ai-replacing-jobs-statistics/>
- India: Trained Beneficiaries in Digital Literacy Scheme 2009-2024 (n.d.). Statista. <https://www.statista.com/statistics/1196927/india-trained-beneficiaries-in-digital-literacy-scheme/>
- Everything You Need to Know About Digital Inclusion in 2024 (2024, November 12). Charity Digital. <https://charitydigital.org.uk/topics/everything-you-need-to-know-about-digital-inclusion-in-2024-11292>
- Being Young in Europe Today - Digital World (n.d.). Eurostat. ec.europa.eu: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Being\\_young\\_in\\_Europe\\_today\\_-\\_digital\\_world&oldid=614196](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Being_young_in_Europe_today_-_digital_world&oldid=614196)
- Wiley Digital Skills Gap Survey (n.d.). Wiley. <https://dsgi.wiley.com/download-white-paper/>
- <https://www.forbes.com/sites/forbestechcouncil/2023/11/07/thedigital-divide-addressing-tech-and-ai-illiteracy-for-our-future/?sh=16e5c0ae375e>



Navigating Tomorrow's Job Market  
with Digital Proficiency