



India Will Need Nine Times as Many Digital Skilled Workers by 2025, Reveals New Report Commissioned by AWS

New survey of digital workers reveals cloud architecture design, cybersecurity, and large-scale data modeling are among the top in-demand skills in India

Digitally skilled workers will be needed to transform non-technology sectors, like manufacturing and education, in India

New Delhi, India, 25 February, 2021 – Today, Amazon Web Services, Inc. (AWS), an Amazon.com company, released findings from a new research report, titled “Unlocking APAC’s Digital Potential: Changing Digital Skill Needs and Policy Approaches.” The report, prepared by strategy and economics consulting firm AlphaBeta, and commissioned by AWS, analyzes the digital skills applied by workers in their jobs today, and projects the digital skills required by workforces over the next five years in six Asia Pacific countries – India, Australia, Indonesia, Japan, Singapore, and South Korea.

The research surveyed more than 500 digital workers¹ in India and interviewed technology experts, business leaders, and policymakers. It confirms that digital skills are important for non-technology sectors like manufacturing and education. In the manufacturing sector, cloud architecture design and the ability to create original digital content such as software and web applications will be among the most in-demand digital skills by 2025, with more than 50% of digital workers in the manufacturing sector believing that they will require these skills to perform their jobs. In the education sector, the ability to develop digital security and cyber forensics tools and techniques will be an important skill. Given the increasing use of the internet in teaching and learning, especially with remote learning, it is becoming critical to ensure that schools, teachers, and students are able to protect against cyber-attacks.

The research reveals that digitally skilled workers currently represent 12% of India’s workforce. The research estimates that the number of workers in India requiring digital skills will need to increase nine times by 2025, and the average worker in India will need to develop seven new digital skills by 2025 to keep pace with technology advancements and demand². This amounts to a total of 3.9 billion digital skill trainings³ from 2020 to 2025.

¹ Digital workers are defined as individuals who have the ability to apply digital technologies on work-related tasks. “AlphaBeta Digital Skills Worker Survey 2020” was conducted by AlphaBeta with more than 500 respondents in India, as part of a sample size of more than 3,000 across six countries in Asia Pacific. The sample size of respondents is statistically significant based on the size of India’s total workforce, at a 95% confidence level – the level typically adopted by researchers.

² Survey respondents of “AlphaBeta Digital Skills Worker Survey 2020” came from industries such as technology, manufacturing, education, telecommunication, financial services, and retail and wholesale trade.

³ One digital skill training refers to one digital skill trained for one worker. The 28 digital skills are highlighted in the “APAC Digital Skills Framework” attached in the Appendix. Each digital skill is matched to eight competence areas which are broad areas of digital know-how and four main proficiency levels – reflecting differing skill ability levels.

The report also reveals that 76% of the digital workers in India today expect cloud computing will be a required competency for digital workers to perform their jobs proficiently by 2025. Cloud architecture design, software operations support, website/game/software development, large-scale data modelling, and cybersecurity skills are the top five in-demand digital skills in India.

To develop the next generation of cloud professionals, [higher education institutions in India](#)⁴ have recently integrated AWS-designed cloud computing content into their mainstream college syllabus. The cloud computing content is offered as part of the education institutions' undergraduate degree and postgraduate diploma programs, designed to address India's growing requirement for cloud skills in cloud architecture, data analytics, cybersecurity, machine learning, and software development.

“The research highlights the demand for more digital workers even in the non-technology sectors such as manufacturing and education,” said Rahul Sharma, President, Public Sector – AISPL, AWS India and South Asia. “AWS is committed to equipping more students and workers with cloud skills that will help drive digital transformation across all sectors. We look forward to expanding our collaboration with more education institutions and industry organizations to grow cloud-skilled talent. A cloud-skilled workforce is instrumental in accelerating innovation and creating a competitive edge for India.”

AWS provides a range of free training opportunities, including more than 500 free courses, interactive labs, and virtual day-long training sessions that are accessible through [AWS Training and Certification](#). AWS also offers students free, self-paced, online learning content for [cloud career pathways](#) related to in-demand jobs such as cloud engineer, cybersecurity specialist, machine learning scientist, and data scientist.

To download the research report of “Unlocking APAC’s Digital Potential: Changing Digital Skill Needs and Policy Approaches”, please access [here](#).

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About Amazon Web Services

For almost 15 years, Amazon Web Services has been the world’s most comprehensive and broadly adopted cloud platform. AWS has been continually expanding its services to support virtually any cloud workload, and it now has more than 200 fully featured services for compute, storage, databases, networking, analytics, machine learning and artificial intelligence (AI), Internet of Things (IoT), mobile, security, hybrid, virtual and augmented reality (VR and AR), media, and application development, deployment, and management from 77 Availability Zones (AZs) within 24 geographic regions, with announced plans for 18 more Availability Zones and six more AWS Regions in Australia, India, Indonesia, Japan, Spain, and Switzerland. Millions of customers—including the fastest-growing startups, largest enterprises, and leading government agencies—trust AWS to power their infrastructure, become more agile, and lower costs. To learn more about AWS, visit aws.amazon.com.

⁴ The higher education institutions that are integrating content from AWS programs are Chitkara University, Punjab; Galgotias University, Uttar Pradesh; Manav Rachna University, Delhi and NCR; Noida Institute of Engineering and Technology, Uttar Pradesh; Sharda University, Delhi and NCR; SRM Institute of Science and Technology, Tamil Nadu; and the ASM Group of Institutes, Maharashtra.

About Amazon

Amazon is guided by four principles: customer obsession rather than competitor focus, passion for invention, commitment to operational excellence, and long-term thinking. Customer reviews, 1-Click shopping, personalized recommendations, Prime, Fulfillment by Amazon, AWS, Kindle Direct Publishing, Kindle, Fire tablets, Fire TV, Amazon Echo, and Alexa are some of the products and services pioneered by Amazon. For more information, visit amazon.com/about and follow [@AmazonNews](https://twitter.com/AmazonNews).

About Amazon Internet Services Private Limited

Amazon Internet Services Private Limited ("AISPL") undertakes the resale and marketing of AWS cloud services in India.

For media inquiries, please contact:

Kiran B.

kiranaws@amazon.com

+91.9886771250

APPENDIX

A LIST OF 28 SPECIFIC DIGITAL SKILLS WAS DEVELOPED, WITH EACH MATCHING TO A COMPETENCE AREA AND PROFICIENCY LEVEL

COMPETENCE AREA	PROFICIENCY LEVELS			
	BASIC SKILLS		ADVANCED SKILLS	
	<i>Foundational user</i>	<i>Specialized user</i>	<i>Integrator</i>	<i>Innovator</i>
VERTICAL COMPETENCES				
1. Devices and software operations	Use basic digital software/hardware	Use specialized software for industry/job function	Deploy software/hardware for use in organizations	Create operations support protocols for new software/hardware
2. Information and data literacy	Use basic data analysis tools	Use specialized software tools for data visualization and analytics	Knowledge of data mining, engineering and science techniques	Create large-scale data models and database technology
3. Digital content or product creation	Use basic software to generate digital content	Use intermediate or advanced software to generate digital content	Integrate digital tools to develop customized digital content/products	Create original digital content and the tools to develop them
4. Cloud computing competencies	Use basic cloud-based software-as-a-service (SaaS) applications and tools	Use specialized cloud-based software-as-a-service (SaaS) applications and tools	Help organizations transition from on premises-based IT environments to cloud-based environments	Design and refine new cloud and hybrid architectures
HORIZONTAL COMPETENCES				
5. Digital communication and collaboration	Communicate and collaborate with others via digital mediums		Integrate different systems of digital communication to develop optimal collaboration tools	Develop new digital communication and collaboration tools
6. Digital problem solving	Identify suitable software/hardware to solve problems		Use digital tools to streamline work processes and resolve systemic problems	Use advanced problem-solving computational techniques
7. Digital security and ethics	Apply basic data privacy and cyber-hygiene principles		Develop protocols to maintain digital ethics and security	Develop digital security and cyber forensics tools, software and techniques
8. Digital project management	Oversee projects with low digital complexity		Plan and drive medium-to-large scale digital projects	Lead the end-to-end management of large complex digital projects

Source: AlphaBeta analysis