

GOVERNMENT OF INDIA
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY
RAJYA SABHA
UNSTARRED QUESTION NO. 541
TO BE ANSWERED ON: 29.11.2024

SKILL DEVELOPMENT INITIATIVES IN DATA SCIENCE AND AI

541. SHRI S NIRANJAN REDDY:

Will the Minister of ELECTRONICS AND INFORMATION TECHNOLOGY be pleased to state:

- (a) the skill development initiatives undertaken to meet the growing demand for professionals in emerging fields like data science and Artificial Intelligence (AI), the details thereof;
- (b) whether Government is collaborating with private companies and educational institutions to implement specialized training in data science and AI;
- (c) if so, the details thereof, and if not, the reasons therefor; and
- (d) whether Government has implemented any assessment or certification standards for these skill development programs to ensure quality and industry recognition, is so, the details thereof?

ANSWER

MINISTER OF STATE FOR ELECTRONICS AND INFORMATION TECHNOLOGY
(SHRI JITIN PRASADA)

(a) to (d): AI is an emerging field. The most reliable ranking in AI has placed India among the four countries with the highest AI capabilities and policy to use AI. Stanford University has ranked India at the top for AI skill penetration. Github, which is community of open-source developers has also ranked India at the top with the global share of 24.19% of all projects. Practically on all parameters, India ranks very high on AI Skills, AI development projects and AI policy. Stanford has also ranked India among top four along-with US, China and UK in Global and National AI vibrancy ranking based on 42 indicators.

India is the IT Skills Capital of the world and Government has been taking steps to ensure that we continue to retain our advantage in IT skills. MeitY has initiated a programme titled “FutureSkills PRIME”, jointly with NASSCOM, aimed at re-skilling/ up-skilling of candidates in new/emerging technologies, namely, Artificial Intelligence, Robotic Process Automation, Augmented/Virtual Reality, Internet of Things, Big Data Analytics, Additive Manufacturing/ 3D Printing, Cloud Computing, Social & Mobile, Cyber Security and Blockchain. FutureSkills PRIME is available as an online platform for digital skills training, which is hosted at <https://futureskillsprime.in/>. On this platform, premium contents are made available to candidates, to facilitate anytime, anywhere learning, in line with their aptitude and aspirations. Under the programme, IT-ITeS Sector Skills Council (SSC) NASSCOM is the Key Implementing Agency. In addition, 22 C-DAC/ NIELIT Centres have been grouped as Lead & Co-Lead Resource Centres (RCs) for the 10 emerging technologies. So far, 8.63 Lakh candidates have enrolled in various courses, out of which, 3.96 Lakh candidates have completed their courses. This includes 1.65 Lakh candidates who have completed their training under the AI and Big Data Analytics technologies.

The FutureSkills PRIME programme is also integrating industry-oriented skilling into academic curricula, with initiatives involving major IT firms like TCS, Tech Mahindra, Cognizant, and Wipro, to create a skilled workforce for the IT industry. Towards this, Chairman AICTE has issued a letter to All Vice Chancellors of Technical Universities/ Director/Principals of AICTE-approved institutions to integrate NSQF-aligned FutureSkills PRIME courses for credit equivalence within their curricula under the provisions of the National Credit Framework (NCrF).

Under FutureSkills PRIME, 309 courses are aligned with the National Occupational Standards (NOS), which specify the knowledge and skills under the National Skills Qualification Framework (NSQF), including the assessment and certification standards based on competency-based learning outcomes, developed and implemented by the IT-ITeS Sector Skill Council (SSC) NASSCOM in collaboration with industry experts.

Government of India approved the IndiaAI Mission, aimed at formulating a comprehensive and cohesive strategy to bridge existing gaps in the AI ecosystem. The mission is built on seven key pillars, which includes the IndiaAI FutureSkills initiative, under which, MeitY is working to expand access to graduate and post-graduate AI programs across India. FutureSkills also seeks to reduce barriers to AI education, focusing on all levels of higher education in the field. Also, a model IndiaAI Data Lab has been set up by the National Institute of Electronics & Information Technology (NIELIT's) at its premises at Karkardooma Institutional Area, Delhi, which acts as a reference point for the infrastructure to be set up as a part of the initiative.

MeitY has also collaborated with the All-India Council for Technical Education (AICTE) and META, to launch the “YuvAi initiative for Skilling and Capacity Building”. This program aims to bridge the AI talent gap in the country by empowering students and young developers aged 18-30 to leverage open-source large language models (LLMs) to address real-world challenges.

Further, the Ministry of Skill Development and Entrepreneurship (MSDE) has been implementing the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) since 2015 to deliver skill development training through Short-Term Training (STT) and up-skilling and re-skilling through the Recognition of Prior Learning (RPL) initiative. As of 30th June 2024, more than 46,000 candidates have been enrolled, with approximately 9,500 completing training in new-age job roles within the IT-ITeS sector, which includes artificial intelligence. In partnership with MSDE, the National Council of Vocational Education and Training (NCVET) has also developed a detailed report on the National Programme on Artificial Intelligence and Skilling Framework, which outlines guidelines for AI and data science skill development across various sectors. This framework, published on 23rd June 2023, is available at https://www.ugc.gov.in/pdfnews/5732498_Report-on-NPAI-Skilling-Framework.pdf.
