The NSDC Weekly Pulse



Trending Topics of the Week!



Riding the Wave of Technological Advancements

India's youth stand poised at the forefront of a like technological revolution, with industries (EV)telecommunications electric vehicles and generating job opportunities. The numerous telecommunications sector is booming with 5G technology, creating roles in network management, cybersecurity and software development. Similarly, the EV industry is expanding, offering jobs in battery technology, vehicle design and maintenance.

To excel in these fields, Indian professionals are

Smart Manufacturing Drives Innovation with AI, IoT and Robotics

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Smart manufacturing is a contemporary approach to producing goods that leverages advanced technology to enhance efficiency, reduce costs and improve product quality. It hinges on several key technologies: Artificial Intelligence (AI), the Internet of Things (IoT) and robotics.

- 1. Artificial Intelligence (AI): It enables machines to learn from data and make informed decisions. For instance, AI can predict when a machine will require maintenance before it fails, thus avoiding costly downtime.
- 2. Internet of Things (IoT): IoT connects machines and devices via the internet, allowing them to communicate and share crucial information. For example, sensors on machinery can monitor performance in real time and immediately alert operators to any issues.
- **3. Robotics:** Robotics involves employing robots to carry out repetitive and precise tasks, reducing human error and boosting productivity. Robots can operate continuously without fatigue, accelerating the production process.

In summary, smart manufacturing focuses on utilising advanced technology to make goods production more efficient, cost-effective and of higher quality. By harnessing AI, IoT and robotics, manufacturers can streamline operations, reduce errors and stay competitive in today's dynamic market environment.

increasingly acquiring new skill sets. Education and training programmes now emphasise practical skills and up-to-date knowledge. With strong industry partnerships, internships and hands-on training, the gap between theory and practice is being bridged. Additionally, continuous learning through online courses, workshops and certifications is becoming essential.



Balancing Technical Expertise and Visionary Leadership

Deciding who drives AI adoption is crucial for businesses. Teams, such as technical experts and data scientists, understand AI's capabilities and experiment with tools to enhance efficiency and innovation. They demonstrate AI's potential to automate tasks, improve decision-making and extract insights from data. Leadership, on the other hand, sets the strategic direction, allocates resources and fosters a culture of innovation. Effective AI adoption requires collaboration: teams provide technical expertise and practical insights, while leadership guides the overall vision and supports integration across the organisation. Together, they ensure AI adoption aligns with business goals, maximises benefits and navigates the complexities of implementation in today's digital landscape.

In conclusion, the journey towards AI adoption should be a collaborative effort between teams and leadership.



