Editorial

Autism and AI

There are justified confusions and concerns about the influence and the impact of Artificial Intelligence on human society. But AI can play a significant role in the area of healthcare and diagnosis. Consider the case of Autism Spectrum Disorder, a lifelong condition that impacts how a person interacts with others and perceives the world. It is characterised by difficulties in communicating socially as well as a tendency towards repetitive behaviour. The condition affects how a person learns, pays attention, and processes sensory information. Since autism is a spectrum, its impact is different in different people; some people require significant support, while others have milder symptoms. Current data estimate the prevalence of ASD in India to be approximately 1-1.5%. In West Bengal, school-based studies around Calcutta have reported lower diagnosed rates (~0.23%) although this is considered to be an underestimate since many children remain outside the school screening system. Again, the gap between the number of children needing support and the number of professionals available is one of th biggest healthcare challenges in West Bengal and India at large. India has a deficit of more than 20,000 clinical psychologists. In West Bengal, the vast majority of RCI-registered licensed clinical psychologists are concentrated in Calcutta. Moreover, special educators mostly work in private special schools in cities. Rural schools, under Samagra Shiksha, often share one special educator across a cluster of institutions. The burden of screening usually falls on anganwadi and ASHA workers in rural areas. While excellent in tracking nutrition and immunisation, they generally lack rigorous training to identify the subtle, early signs of autism. This leads to children being identified only when they have severe behavioural issues or speech development delays. Consequently, the current model in India is shifting towards 'Parent-Mediated-Intervention'. Since there aren't enough therapists, professionals train parents to become the primary therapists at home. AI can become a transformative partner for the autistic community, offering tools providing accessibility, personalised support, and non-human emotional support. Moving beyond a one-size-fits-all approach, AI can help bridge the gap between neuro-diverse and neuro-typical experiences in different ways. AI tools can analyse subtle behavioural biomarkers — like gaze patterns, vocal prosody, social responses and motor movements — from simple home videos and games. Tools like 'eye-tracking AI' can identify social attention differences in toddlers in a very short time, allowing for early intervention. AI-based games can also leverage machine-learning to analyse behavioural patterns, which are too subtle for the human eye during a clinical visit. Moreover, these tools are designed to be engaging for children while providing objective data to clinicians. Crucially, humanoid robots can act as non-judgemental therapists interacting with children with endless patience. They can repeat social scenarios hundreds of times without getting tired, helping children practise eye contact and emotional recognition. Present-day Gen-AI models can also act as social translators to rephrase confusing instructions into clear, literal steps, thereby reducing the cognitive load for children with advanced autism.

260 units of the all-new Tata Sierra across key cities in Gujarat today

Ahmedabad, Tata Motors Passenger Vehicles Ltd., one of India's leading automotive brands, delivered over 260 units of the all-new Tata Sierra across key cities in Gujarat today. The Sierra has crossed 100,000 bookings nationally, reflecting the strong demand and enduring appeal of this iconic nameplate. This phenomenal response underscores the Sierra's iconic status and its magnetic appeal as a premium mid-SUV in the hearts and minds of customers across India. The milestone deliveries were held across Ahmedabad, Surat and Rajkot, where customers took delivery of their all-new Tata Sierra, marking a large-scale celebration of the iconic SUV across the state. (1-7)

How India balances energy security with a clean transition amid global risks

While West Asia remains at war and volatile, India has successfully utilised high-level diplomacy with Iran to secure safe passage for its oil and LPG tankers through the tense Strait of Hormuz, maintaining critical energy supplies. But India continues to be heavily dependent on imported petroleum, which is also crucial for its economic rise. India is the world's third-largest oil consumer and importer, with over 85 per cent dependence on imported crude oil and 55 per cent for natural gas. Consumption is rising, with 21.05 MMT petroleum products used in January 2026, up 2.5 per cent year-on-year, driven by transport and industrial demand. Russia has emerged as the top supplier with nearly 40 per cent of imports, followed by Iraq and Saudi Arabia and diversified procurement covering over 40 countries. Average consumption for the April-January financial year (FY) 26 was roughly 5.43 million barrels per day (bpd).

India is a major refining hub with capacity reaching roughly 258 million metric tonnes per annum (MMTPA) as of FY25. Petroleum products are used mostly in transportation (road/rail), aviation, petrochemicals, and cooking (LPG). To secure supply, India has reduced reliance on the Strait of Hormuz, with roughly 70 per cent of crude imported via alternative routes. Indian refiners are investing heavily to increase refining capacity by approximately 309.5 MMTPA by 2028–2030.

India's key growth drivers are rapid urbanisation, industrialisation, and electric mobility, which are driving electricity demand. As of early 2026, India's energy mix is dominated by coal but is shifting rapidly toward renewables. Total power capacity has exceeded 476 GW, with non-fossil sources (renewables and nuclear) making up nearly 49 per cent of the mix, driven by significant solar and wind growth. As part of a strategic shift, India is investing heavily in green hydrogen and biofuel to reduce its massive fossil fuel import bill by 2030. India has pledged to achieve net-zero emissions by 2070. There is a need to expand non-fossil sources of energy and especially reduce petroleum dependence.

Key Components of India's Energy Mix As of January 31, 2026, India's total installed electricity generation capacity reached approximately 520.5 GW. Non-fossil fuel sources generate 271.97 GW (52.3 per cent), of which solar, wind, and large hydro account for 50.6 per cent and nuclear 3.1 per cent. Fossil fuel sources generate 248.54 GW (47.7 per cent). Coal (thermal) remains the primary energy source for electricity generation, with solar energy being the fastest-growing source, exceeding 130 GW by late 2025. Oil and gas comprise about 30 per cent of the energy mix, used predominantly in transport and industry. Nuclear provides a small, stable, low-carbon contribution. Nuclear power capacity has been increasing. India aims to have 500 GW of non-fossil fuel capacity by 2030.The global energy mix is also currently dominated by fossil fuels, which account for roughly 80 per cent of primary energy consumption, comprising oil (31-33 per cent), coal (26-27 per cent), and natural gas (23-24 per cent). While renewables, including wind and solar, are growing rapidly, accounting for 38 per cent of demand growth, fossil fuels remain central to global supply, heavily driven by coal consumption in Asia (China and India). In electricity alone, coal leads (35.5 per cent), followed by natural gas (22.1 per cent), hydropower (14.6 per cent), and nuclear (9.1 per cent). While renewable adoption is increasing, the global energy transition from fossil fuels is a slow, multi-decadal process. In 2024, renewable energy consumption grew by 8 per cent, with China responsible for more growth than the rest of the world combined. Global energy demand soared in 2024 by 4.3 per cent, fuelled by AI and data centres, air conditioning, and industrial growth. Major Oil and Gas Producers and Importers The United States, Saudi Arabia, and Russia are the world's leading oil and gas producers. The US leads in crude oil (over 13 million bbl/day) and total petroleum liquids driven by shale, while Russia and Iran hold massive natural gas reserves. Saudi Arabia is a leading Opec producer with massive, low-cost reserves. Other top producers include Canada, a significant producer with large oil reserves. China, Iraq, Iran, the UAE, Brazil, and Norway are other large producers. Venezuela holds the largest proven oil reserves, followed by Saudi Arabia. Russia consistently ranks among the highest in natural gas production. The US is a major natural gas producer, particularly from shale. Iran holds vast, underutilised natural gas reserves. Qatar is a leading LNG exporter and producer. Canada and Algeria are significant natural gas contributors. North America and the Middle East produce nearly 60 per cent of the world's oil. The US, China, and India are the world's largest consumers of oil and gas, together driving a significant portion of global demand. These nations account for over 60 per cent of total global consumption, with demand focusing heavily on petroleum products like diesel, gasoline, and liquefied petroleum gas (LPG). The US consumes nearly 20 million barrels per day (mbpd), representing roughly 18.7 per cent of global consumption. China 16.4 mbpd (16.1 per cent), India 5.6 mbpd (5.5 per cent), Saudi Arabia 94.0 mbpd (3.9 per cent), Russia 3.8 mbpd (3.8 per cent of total) and Japan 3.2 mbpd (3.2 per cent). Oil and gas are used for transportation, plastic production and manufacturing, power generation and fertilisers. China is the world's top crude

oil importer, followed by Europe and the United States. India is the third-largest consumer and a major importer, heavily reliant on Russia, Iraq, Saudi Arabia, the UAE, and the US. For LNG (natural gas), top importers include China (76.5 billion kg), the European Union (72.7), Japan (65.8), South Korea (46.3), and India (27.7 billion kg). India's oil imports were over $140 billion in FY25. Crude oil imports reached 244 million tonnes in FY25, while natural gas imports were around 31.80 billion cubic metres (BCM). Crude oil imports are increasing by 5.43 per cent year-on-year. India imports about 60 per cent of its LPG requirements, which accounted for 40 per cent of all petroleum product imports by volume in 2024-25. Due to geopolitical tensions in the Middle East, India has increased its non-Hormuz sourcing, with 70 per cent of crude imports now routed outside the Strait of Hormuz. India's oil demand is projected to reach 11 mbpd by 2045. China is the world's largest coal user, consuming around 56 per cent of the global total, primarily for electricity generation and steel production. Together with India (14 per cent), the US (5 per cent), Indonesia (3 per cent), and Japan (2.5 per cent), these nations dominate global consumption and demand, largely driven by industrial growth. The US primarily uses coal for electricity (approx. 91.7 per cent of its domestic consumption). The leaders in coal production (million tonnes) are China (4,780), India (1,085), Indonesia (836), the US (464), Russia (427), and Australia (462).