

# Indians earn 3 patents in assistive technologies for differently-abled

## Providing a Limb

- Assists lower limb movement
- Easier machine operation
- Optical sensor variant
- Haptic glove variant, the latest

NEW DELHI

A team of Indian researchers has reimagined the sewing machine's foot pedal with assistive technology, enabling the entire operation through hand control.

The first prototypes were tested by rural women with locomotor disabilities, and the excitement spread quickly, according to Sona College of Technology where the feat was achieved.

The idea came into existence after the researchers noticed that some women with restricted lower-limb movement were unable to operate industrial sewing machines.

A four-member team — D Raja, K Mani, G Gunasekaran and SS Suresh — rose to the challenge and have earned three patents.

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Haptic Glove Variant (2025), the latest breakthrough, is a wearable glove that uses palm-pressure sensing to wirelessly activate the sewing machine motor. It provides ergonomic comfort and stands as a symbol of inclusive design

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The Optical Sensor Variant, patented in 2024, recognises hand gestures to control the sewing machine. It is hands-free, light-touch, and enhances both safety and adaptability.

The first in the series was the Load-Cell L-Plate Variant, patented in 2022. It replaced the traditional foot pedal with a hand-press system.

For the first time, differently-abled women could sew independently and perform all standard industrial operations in a garment making unit with ease and efficiency. This innovation also opened the door for them to earn a steady income in garment-making units close to home, according to the Tamil Nadu-based institute.

In the past nine years, over 300 differently-abled women have been trained to use these patented machines. For many, this has meant not just livelihoods in tailoring and garment production, but also a renewed sense of dignity

and self-worth. "These patents are not just about technology," said Chocko Valiappa, Vice Chairman, Sona College of Technology, "they are about breaking barriers, creating opportunities, and showing that inclusion can be designed into everyday tools," he added.

The Tamil Nadu government has sponsored these patented eleven sewing machines for livelihood support for differently-abled women at a Sona College-run community centre in Maraman-galathupatti, Salem district. Another three hundred women have been trained at the centre.

# GI Council affirms support to Star Health to safeguard policyholders

Tariff negotiations and billing practices are regular business activities between hospitals and insurers and should never be used to compromise patient care

MUMBAI

SUPPORT to Star Health and Allied Insurance following the unilateral and unwarranted action taken by the Association of Healthcare Providers (India) (AHPPI), threatening suspension of cashless services for policyholders. Such arbitrary action prejudices the interests of policyholders and risks undermining trust in the health insurance ecosystem.

The Council had proactively scheduled a meeting with AHPPI on September 2, to constructively resolve concerns. However, AHPPI rescheduled the meeting to a future date yet to be confirmed. Despite this, AHPPI has proceeded with its unilateral action, signalling a preference for disruption over collaboration to improve customer service and protect patient interests.

Tariff negotiations and billing practices are regular business activities between hospitals and insurers and should never be used to compromise patient care. Star Health policyholders will continue to have unin-



interrupted access to healthcare, ensuring their coverage remains fully protected. Any disruption in cashless services directly impacts families through higher upfront expenses and risks patient well-being in emergencies.

The health insurance industry has consistently invested in reforms to make quality healthcare accessible and affordable. Initiatives such as Cashless Everywhere and the National Health Claims Exchange (NHCE) ensure seamless treatment for citizens nationwide. The

recent removal of GST on health insurance premiums has further strengthened financial protection for all policyholders.

The General Insurance Council urges AHPPI to immediately withdraw its warning and engage constructively with insurers, ensuring uninterrupted cashless services for all policyholders. The Council and the insurance industry remain committed to providing better services, a seamless customer experience, and reliable access to quality healthcare across India.

## SOCIAL MEDIA HAS NEGATIVE IMPACT ABOUT CONTRACEPTIVE PILLS

NEW DELHI: Social media may be driving negative opinion on contraceptive pills, leading to women discontinuing birth control drugs within two years of starting them, according to a study.

Researchers at the University of Sheffield identified a "nocebo effect" in relation to the contraceptive pill, where psychological factors such as negative expectations or anxiety about using a medicine drives a physical response in the body when the medicine is taken. Nocebo responses to the oral contraceptive pill are real and can include feelings of depression, anxiety, and fatigue. The nocebo effect is the "evil twin" to the placebo effect, where people get a positive boost from taking a dummy tablet or pill.

The team highlighted that many women switch to alternative but less effective forms of contraception. In many cases, side effects were central to their decision to discontinue using oral contraception. "The contraceptive pill gets a lot of negative attention, particularly on social media, and we were interested in how these negative views could be influencing the way women are experiencing oral contraception," said Dr Rebecca Webster, from the University of Sheffield's School of Psychology.

# Smartwatch, fitness tracker may help detect abnormalities in pregnancy

Wearable devices offer a unique opportunity to develop innovative solutions that address high number of adverse pregnancy outcomes in US

NEW DELHI

A simple wearable device like a smartwatch or a fitness tracker may help revolutionise pregnancy care and easily detect abnormalities.

Scientists at Scripps Research have found preliminary evidence suggesting that common wearable devices such as the Apple Watch, Garmin, and Fitbit could remotely monitor pregnancy-related health changes by tracking physiological patterns -- like heart rate -- that correlate with hormonal fluctuations. "Wearable devices offer a unique opportunity to develop innovative solutions that address the high number of adverse pregnancy outcomes in the US," said co-senior author Giorgio Quer, the director of artificial intelligence and assistant professor of Digital Medicine at Scripps



Research. "Our results show that signals collected via wearable sensors follow the expected changes in hormone levels and can detect unique patterns specific to live birth pregnancies, potentially allowing the monitoring of maternal health throughout the pregnancy and postpartum."

For the study, the team selected 108 individuals who had consented to provide data from three months before their pregnancy through six months after delivery. Using sophisticated statistical meth-

ods to identify population-level patterns, the team could account for individual differences and device variations.

From this data, the scientists were able to identify physiological patterns that aligned with the fluctuation of key pregnancy hormones such as oestrogen, progesterone, and human chorionic gonadotropin (hCG). The fluctuations of these hormones are critical to healthy pregnancy outcomes and provide insight into the pregnancy's progression.

The heart rate data was particularly compelling. During early pregnancy, researchers found that the individual's heart rate initially decreased around weeks five to nine, then steadily increased until about eight or nine weeks before delivery, reaching peaks up to 9.4 beats per minute above pre-pregnancy levels.

# Study claims artificial sweeteners can lead to faster cognitive decline

Reveals that people who used artificial sweeteners moderately had a 35% faster rate of memory and thinking decline

NEW DELHI

LONG-term use of artificial sweeteners or low- and no-calorie sweeteners, used mainly by people with diabetes, can lead to cognitive decline, claimed a study.

Researchers from the Universidade de São Paulo, Brazil, analysed 12,000 patients who use common artificial sweeteners such as aspartame, saccharin, xylitol, erythritol, sorbitol, tagatose, and acesulfame K. The results, published in the Neurology journal, found that people who consumed the highest amounts had the greatest declines -- 62 per cent -- in thinking and memory, as compared to those who consumed less.

The declines amounted to 1.6 years of additional brain ageing. "We know sugar and sugar substitutes raise the risk of diabetes



and malignancies. They are also linked to brain vascular cell dysfunction," Dr Manjari Tripathi, head of the neurology department at AIIMS, said. She advised restricting its use.

The study revealed that the people who used the artificial sweeteners moderately had a 35 per cent faster rate of memory and thinking decline, and a 110 per cent faster rate of verbal fluency decline.

For those in the high consumption group, the rate of memory and thinking decline was 62 per cent faster, and their verbal fluency decline was 173 per cent faster.

# TN launches pilot AI, robotics programme in govt schools

In Coimbatore district alone, 85 government schools have been included in the first phase

CHENNAI

Exposure to Artificial Intelligence (AI), robotics and digital tools is no longer confined to private schools. In a significant step towards bridging the technological divide, the Tamil Nadu government has rolled out a pilot programme this academic year to train government school students in AI applications, coding and interactive online tools.

The initiative, titled Tamil Nadu Schools Programme for AI, Robotics and Knowledge of Online Tools (TN SPARK), is currently being implemented for Classes 6 to 9. It aims to create a tech-savvy generation that can keep pace with emerging trends irrespective of socio-economic background. In Coimbatore district alone, 85 government schools have been included in the first phase. These com-



prise 78 middle schools, four high schools and three higher secondary schools. Dedicated bilingual textbooks in English and Tamil have been prepared for the new curriculum, and trained mathematics and science teachers are handling the sessions.

Each school has allocated one or two periods a week for TN SPARK classes. Around 880 hi-tech lab computers are being used to deliver the programme. While the modules

begin with introductory sessions, the syllabus will move into full swing from October after quarterly examinations.

The curriculum introduces students to the foundations of computer science, including algorithms, flowcharts, word processing and data visualisation. It also integrates online educational tools that offer interactive lessons across subjects such as science, geography, anatomy and languages.



**THE POLITICA**  
Nothing political about it



Maj Sunil Shetty

The recent turmoil in Nepal is reminiscent of Bangladesh, where external forces orchestrated regime change under the guise of student and youth unrest against the ruling party. From Afghanistan to Myanmar, and from Sri Lanka to Nepal, the entire region has been engulfed in flames. This explosive geopolitical development in Bharat's backyard has once again raised critical questions. How should Bharat secure its immediate neighbourhood from external interference, especially when deep states and their agents are clearly at work across the subcontinent?

New Delhi's influence in the Indian Ocean Region (IOR), which spans from Indonesia in the east to Somalia in the West, is continually challenged by both China and the United States. Adding to the uncertainty is Donald Trump's unpredictable diplomacy, tariff wars, and frequent targeting of New Delhi. It is time for New Delhi to undertake a hard reset of its geopolitical approach, moving some of its covert

strategies into overt action, to secure the ancient Bharat Bhūbhāg, which historically extended from Afghanistan in the West to Myanmar in the east and the Maldives to Tibet. In today's context, simply securing our physical borders will not suffice. New Delhi must actively extend its influence from Tibet to Sri Lanka, from Myanmar to Afghanistan, and this calls for bold new doctrines and a reinvigoration of old ones.

## Fixing the West: Disintegration of Pakistan

The disintegration of Pakistan must be a top priority in the coming decade. A fragmented Pakistan, split into 3-4 entities with an independent Balochistan and the return of PoK and Gilgit-Baltistan to Bharat, will not only reduce the threat posed by the Pakistani military but also open land access to Afghanistan and Central Asia. A smaller, marginalised Pakistan is far less dangerous than the current one. To achieve this, Bharat should be open to engaging with Pakistan's political class, landlords, and people. If we can work with the Taliban, why not with Pakistan's political elites and communities? The ultimate goal should be to render Pakistan landlocked and dependent on Bharat for survival. Additionally, Bharat must deepen its outreach in Afghanistan, the North-West Frontier Province, and Balochistan

— not just through security partnerships, but also by reviving ancient cultural ties, trade routes, and people-to-people linkages.

## Aligning the North: Tibet, Nepal, and Bhutan

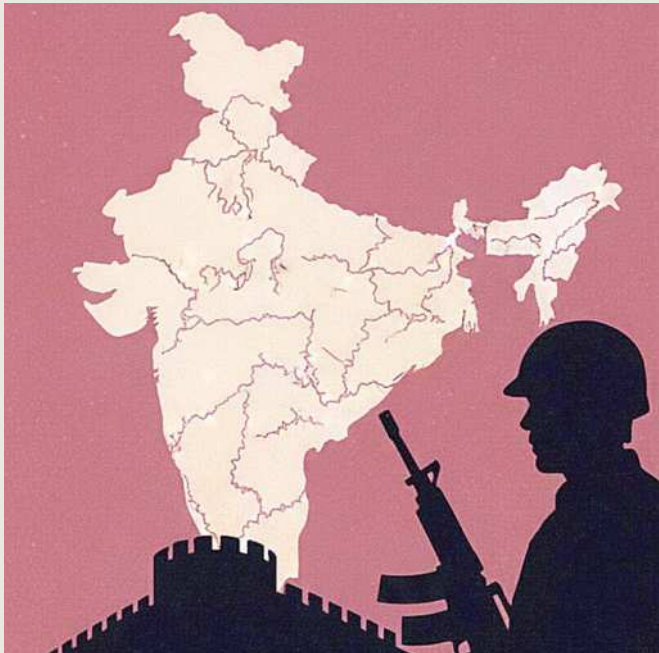
Tibet remains central to Bharat's security. A timeline must be set for its eventual liberation, either as an independent state or as a spiritual extension of Bharat. Meanwhile, Nepal and Bhutan need to be fully aligned with Bharat's strategic interests. Just as Sikkim was integrated, Kathmandu and Thimphu must have no scope for foreign interference.

## Securing the East: Bangladesh and Myanmar

Bharat's eastern flank is equally vulnerable. In Bangladesh, the constant anti-Bharat undercurrent must be addressed by New Delhi. It must prepare for strategic contingencies — including exploring a north-south division that ensures Bharat retains land access near the Chicken's Neck corridor. In Myanmar, Bharat should actively support friendly governments and expand its influence to counter China's & US's growing footprint.

## Bridging the South: Indian Ocean neighbours

In the south, with Sri Lanka, the Maldives, and other Indian Ocean nations, Bharat must build deep, long-term geopolitical partner-



From Pakistan's fault lines to Nepal's turmoil, from the Indian Ocean to Tibet, Bharat faces unprecedented external challenges. The age of soft diplomacy alone is over. To secure its future, Bharat must forge bold new doctrines, deepen influence, and build a disciplined deep state to achieve its Vishwik Bharat vision

ships. These bridges of influence, whether military, economic, cultural, or political, will ensure security in a region where external powers are aggressively seeking footholds.

## Updating old doctrines

Traditional tools, such as stu-

dent scholarships, cultural exchanges, and people-to-people initiatives, must be supplemented with sharper instruments by New Delhi. While soft power remains essential, it cannot be the only pillar of Bharat's regional policy. The Chinese model offers lessons:

Beijing invests heavily in infrastructure, buys influence through large projects, and places allies in key positions of power. Bharat must adopt a version suited to its ethos — one that invests in human capital, small businesses, and community leaders in neighbouring countries, while simultaneously funding strategic infrastructure that ties these nations closer to us. New Delhi must also be pragmatic about costs. Securing our interests comes at a price, and that price is increasingly denominated in dollars. Bharat must stop being hesitant about funding local leaders, grassroots influencers, and even political formations that align with our strategic vision. Just as major powers cultivate friends abroad, Bharat too should identify emerging voices — from village leaders to national politicians — and nurture them with resources, platforms, and goodwill. The age of passive diplomacy is over; in the new neighbourhood, Bharat must put its money where its interests are.

## Building Our Own Deep State

Finally, Bharat must develop its own deep state — one dedicated to long-term nation-building. Every great power has such a structure: an ecosystem of intelligence agencies, think tanks, media, academia, and covert assets working in concert to secure the nation's interests. Bharat's institutions often work in

silos, missing the larger strategic picture. That must change.

A professional, resilient, and proactive deep state could shape narratives, influence political outcomes in the region, and counter hostile propaganda. Such a structure must be insulated from corporate capture and elite families seeking to bend it to private interests. Its sole loyalty should be to the nation. A disciplined, home-grown deep state, accountable to Parliament yet with operational autonomy, could become the most decisive tool in realising the vision of "Vishwik Bharat." For such a deep state to emerge will require a permanent cadre of specialists in culture, language, technology, and psychological operations — people trained not just in espionage, but in building long-term influence. Unlike the ad-hoc, election-driven approaches of the past, this deep state must operate with continuity across governments, guided by national rather than partisan goals.

The question remains: does the Modi government have the gumption to play such a high-stakes game in Bharat's backyard? The time for half-measures is over. The subcontinent is in flux, and only decisive, imaginative, and bold moves will secure Bharat's rightful place as a global superpower.

(The author is Founder of My Startup TV)