

To receive Daily news juice pdf on your WhatsApp, send name and city through WhatsApp on 75979-00000.

1. Bangladesh elections and India

What happened?

As Bangladesh votes in national elections, India will be watching closely. The countries share a 4,100-km border and deep historical, cultural, and economic ties. A stable, prosperous and friendly Bangladesh is in India's best interests.

Thus, India stands firmly behind the incumbent Sheikh Hasina. Seen as one of India's closest friends and allies, she has over the years fostered a friendly and mutually beneficial relationship between the two countries.

What is at stake for India in Bangladesh's elections?

NATIONAL SECURITY: Before Hasina came to power in 2009, the previous Bangladesh Nationalist Party-led government was quite hostile to India — and provided safe haven to numerous anti-India terrorist and militant groups. It allegedly also had links to Pakistan's ISI, and gave space to hardline Islamist radicals.

Hasina has been a very cooperative leader who has dramatically eased India's security burden on its very long eastern border. Her crackdown on anti-India elements and counter-terrorism cooperation with India has single-handedly improved India's overall security situation over the last decade or so.

Especially given the deteriorating situation in Myanmar, it becomes even more important that India and Bangladesh remain close security partners.

DEEP ECONOMIC TIES: One of the big changes in South Asia over the last few years is the economic rise of Bangladesh, which has replaced Pakistan as the second largest economy in the region. According to World Bank data, the GDP of Bangladesh was \$460 billion in 2022, more than Pakistan's \$375 billion.

In 2022-23, Bangladesh was the fifth largest export destination for Indian goods, after the United States, the UAE, the Netherlands, and China. It accounted for more than 2.7 per cent of all Indian exports, worth \$12.2 billion.

Under Hasina, Bangladesh is facilitating efficient connectivity to India's Northeast through overland transit and inland waterways.

Bangladesh is also crucial for economic integration within the subcontinent, especially since Pakistan refuses to support regional economic cooperation.

REGIONAL COOPERATION: Beyond the subcontinent, India would like Bangladesh to become a fulcrum for regional cooperation in the Bay of Bengal littoral linking South and South East Asia.

Dhaka hosts the secretariat of The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) that connects the eastern subcontinent with Myanmar and Thailand. In recent years, many of India's friends such as Japan have invested heavily in Bangladesh.

What about allegations of democratic backsliding in Bangladesh under Prime Minister Hasina?

The political stability in Bangladesh since Hasina came to power has been very helpful for India, and thus, she remains India's best bet. She has kept radical extremist forces at bay, and rekindled India's relationship with Bangladesh.

Yes, there have been questions raised by some regarding Bangladesh's democratic backsliding under Hasina. But the alternatives to her are a bigger threat not only to democracy but also to peace and prosperity in the region.

Isn't Hasina's increasing 'proximity' to China a concern for India?

This is somewhat overstated — it is not as if she is turning to China at the expense of India. It must be remembered that China is the second largest economy in the world, and located next door to South Asia. It has investments across the globe. To expect that India's neighbours will not do business with China is unrealistic.

In fact, compared to all other neighbours with the exception of Bhutan, Bangladesh has been far more careful in navigating the tensions between India and China.

At the end of the day, New Delhi's main consideration is that Bangladesh, or for that matter any neighbour, does not do anything that hurts India's security. That is the red line which Dhaka under Hasina has respected.

The US has been very critical of Hasina and her government. How does this impact India's interests, given its friendship with the US?

There are historical reasons for Bangladesh's tense relationships with the US and the UK, given their proximity to Pakistan and their negative role in 1971. Sheikh Hasina unsurprisingly views them with great distrust.

The US' own record has been fairly inconsistent when it comes to calling out authoritarianism. While the Americans seldom talk about democracy in Pakistan, they

tend to bully Bangladesh. Things eased up under the Trump administration, but under President Joe Biden, the US had gone back to its 'human rights agenda' in Bangladesh.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: The Indian Express

2. 7 Odisha products that have bagged GI tag

Seven products from Odisha, ranging from the Similipal Kai chutney made with red weaver ants to the embroidered Kapdaganda shawl, have bagged the coveted Geographical Indication (GI) tag in recognition of their exclusivity to the state.

Geographical Indications of goods refer to the place of origin of a product. Such tags are accorded as they convey an assurance of quality and distinctiveness, attributable to the fact of its origin in a specific geographical locality, region or country.

A marker of authentic products, the GI tags also help protect the interests of the local growers and artisans by preventing duplicity of the products. Consumers, through the tags, can know which goods are certified. Here is a quick look at the seven products and what makes them distinctive:

1. Kapdaganda shawl



Woven and embroidered by the women of the Dongria Kondh tribe, a particularly vulnerable tribal group (PVTG) in the Niyamgiri hills in Odisha's Rayagada and Kalahandi districts, the shawl reflects the rich tribal heritage of the Dongria Kondhs.

It is embroidered on an off-white coarse cloth with red, yellow and green coloured threads, with each colour holding significance. Green symbolises the mountains and hills, and yellow stands for peace and happiness. Red stands as the symbol of blood.

The motifs in the shawls are mostly lines and triangles, believed to be a reflection of the importance of mountains for the community. The shawl is worn by both men and women and the Dongrias gift it to their family members as a token of love and affection.

2. Lanjia Saura Painting

The painting, one of the oldest tribal art forms, is also known as Idital. The artworks are famous for their beauty, aesthetics, ritualistic association and iconography.



The art form belongs to the Lanjia Saura community, a PVTG largely residing in the Rayagada district. These paintings are in the form of exterior murals painted on the mud walls of homes. White paintings figure over a crimson-maroon background.

It is believed that the Lanjia Sauras paint their walls with Idital artworks to show gratitude to their deities and forefathers, and also for the well-being of their community. Reflecting the love and affection of the primitive tribes for nature, they feature subjects like tribal humans, trees, animals, birds, the Sun and the Moon.

3. Koraput Kala Jeera Rice

The black-coloured rice variety, also known as the 'Prince of Rice', is famous for its aroma, taste, texture and nutritional value. Tribal farmers of the Koraput region have preserved the rice variety for around 1,000 years. As the rice grains resemble cumin

seeds, it is also called Kala Jeera. Consumption of the rice variety helps in increasing haemoglobin levels and improves metabolism in the body.

The farmers and producers of Koraput Kala Jeera rice have followed the traditional knowledge and practices in cultivation. Ancient tales also speak about the physical, mental and spiritual delights resulting from the consumption of the rice variety.

4. Similipal Kai chutney

The chutney made with red weaver ants is a traditional delicacy of the tribals in Odisha's Mayurbhanj district. The ants are found in the forests of Mayurbhanj, including in the Similipal forests – Asia's second-largest biosphere. Rich in medicinal and nutritional value, the chutney is believed to be a good source of nutrients like protein, calcium, zinc, vitamin B-12, iron, magnesium, potassium, etc.

The tribals prepare the Kai chutney by grinding the ants manually on a Sil Batta or the grinding stone. Mayurbhanj's tribals also earn their livelihood by selling the red ants and the chutney made from the ants. They believe that its consumption helps boost immunity and prevents diseases.

5. Nayagarh Kanteimundi Brinjal

Nayagarh Kanteimundi Brinjal is known for its prickly thorns on the stems and the whole plant. The green and round fruits contain more seeds as compared to other genotypes. It is famous for its unique taste and relatively short quick cooking time. The plants are resistant to major insects and can be grown with minimal pesticide.

It is being widely cultivated in Nayagarh district of the state. The growers are getting a yield of up to 200 quintals per hectare and selling at around Rs 60 per kg. Historical records also suggest that the locals got the brinjal from the hilly areas. They collected seeds from it and started raising seedlings nearly 100 years ago.

6. Odisha Khajuri Guda

Odisha's "Khajuri Guda" or jaggery is a natural sweetener extracted from date palm trees and has its origin in the Gajapati district. Traditionally, the jaggery is prepared in a trapezoidal form called 'Patali Gur' and is organic by nature. It is dark brown and has a unique taste.

7. Dhenkanal Magji

Dhenkanal Magji is a type of sweet made from cheese from buffalo milk, with distinct characteristics in terms of appearance, taste, flavour, shape, and size. It also has unique nutritional values that distinguish it from other cheese-based sweets.

Thousands of people were said to be earning their livelihood through animal husbandry, especially buffalo rearing, during the British era. The region was the

hinterland of buffalo milk production and cheese was the third largest produce, after milk and curd. Mandar-Sadangi area of Gondia block is believed to be the centre of origin of the sweet stuff, which has now been spread to the entire district.

The sweet is prepared by draining moisture from the cheese and then frying it, finally forming balls from the mixture.

Relevance: GS Prelims; Economics

Source: The Indian Express

3. How AI can help detect cancer and why India's biggest cancer treatment hospital is utilising it

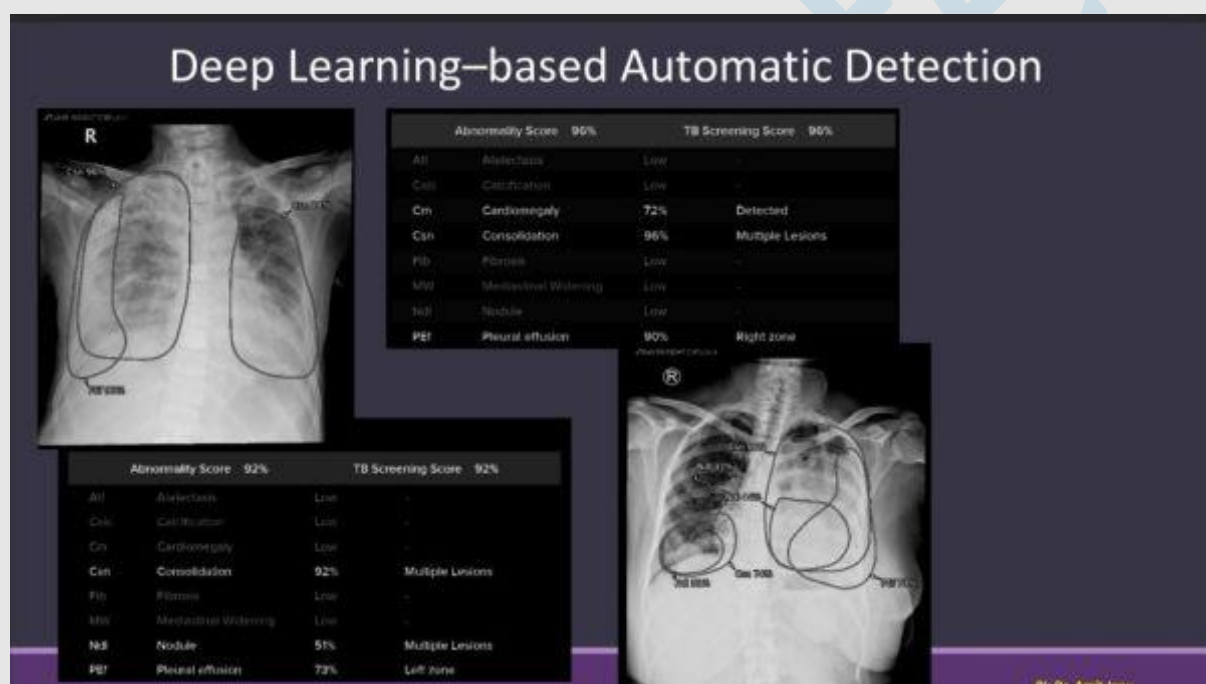


Figure 1 Screenshot from a presentation on how AI automatically detects cancer

Introduction

Given the escalating cases of cancer, the shortage of specialists poses a significant challenge in curbing fatalities. To address this gap, Mumbai's Tata Memorial Hospital (TMH), the biggest cancer hospital in India, is turning to artificial intelligence (AI).

By established a 'Bio-Imaging Bank' for cancer, the hospital is utilising deep learning to craft a cancer-specific tailored algorithm that aids in early-stage cancer detection. It incorporated data from 60,000 patients into the biobank in the last year.

What is a 'Bio-Imaging Bank', and how does AI come into the picture?

The project's overarching goal is to create a robust repository encompassing radiology and pathology images, intricately linked with clinical information, outcome data,

treatment specifics, and additional metadata. This comprehensive resource is strategically designed for the training, validation, and rigorous testing of AI algorithms.

Initially focusing on head neck cancers and lung cancers, with a minimum of 1000 patients for each cancer type, the project aims to surpass the committed patient data for both cancer types by its completion date. Alongside database creation, the project involves training and testing multiple AI algorithms using the gathered data, addressing medically relevant tasks such as screening for lymph node metastases, nucleus segmentation and classification, biomarker prediction (for instance, HPV in oropharyngeal and EGFR in lung cancer), and therapy response prediction.

The multi-institutional project is funded by the Department of Biotechnology, in collaboration with IIT-Bombay, RGCIRC-New Delhi, AIIMS-New Delhi, and PGIMER-Chandigarh.

How does AI help in early cancer detection?

AI contributes significantly to cancer detection by emulating the human brain's information processing. In cancer diagnosis, AI analyses radiological and pathological images, learning from extensive datasets to recognise unique features associated with various cancers. This technology facilitates early detection by identifying tissue changes and potential malignancies.

Comprehensive imaging generates longitudinal patient data, aiding in understanding behaviour, treatment response, disease recurrence, and overall survival. AI and machine learning protocols utilise this data to develop predictive models for tumour survival and guide treatment aggressiveness.

The creation of a tumour image bank involves segmenting and annotating images, outlining tumours, identifying different features, and annotating them as malignant, inflammatory, or edematous. Biopsy results, histopathology, immunohistochemistry reports, and genomic sequences are correlated with images and clinical data to develop diverse algorithms.

This approach allows TMH to develop algorithms for different tumours, assess treatment responses directly from images, and avoid unnecessary chemotherapy for predicted non-responders, offering clinical utility. Leveraging the biobank, predictive

and diagnostic models are developed using thousands of breast cancer images, undergoing AI and ML analysis with technical support from partners like IIT-Bombay.

Is this technology currently in use?

Yes. TMH has already added the data of 60,000 patients into the biobank over the previous year, started using AI to reduce radiation exposure for paediatric patients undergoing CT scans.

Relevance: GS Prelims & Mains Paper III; Science & Technology

Source: The Hindu