

Pankaj Sharma, 50, moved to Canada in 2019. He followed his wife, Pooja Tandon, an IT professional who was offered a role there. In 2022, they applied for permanent residency that will make them eligible for citizenship after five years, on fulfilling certain conditions. "The primary reason to move was professional, but after coming here, we realised that our daughter was at a stage in her life that we could not change her education system too often, so we applied for permanent residency and got it," Mr. Sharma said.

He said his daughter, who often fell sick in Delhi due to air pollution, has not complained of chest infection since they moved to Canada. In 2022, over 2.25 lakh Indians renounced Indian citizenship, the highest since 2011, according to data from the Ministry of External Affairs. The data reflect how Indians, especially high net worth individuals (HNIs), are moving westward in search of better opportunities, healthcare, quality of life, and education, among other factors.

The Chief Justice of India D.Y. Chandrachud's firm refusal of 'suggestions' offered by the government in a sealed cover on the formation of a proposed committee to enquire into the Hindenburg report on the Adani Group signals the Supreme Court's awareness of how 'sealed cover jurisprudence' has begun to threaten the credibility of the judicial institution. Sealed cover documents have been received in cases such as the Rafale jets' purchase deal, Assam National Register of Citizens case, Ayodhya title dispute, Gujarat Police 'fake' encounter case, Narendra Modi biopic release case etc. The court has said that the burden would lie on the government to prove that even sharing redacted copies of the records would prove detrimental to national security and public order.

Finance Minister Nirmala Sitharaman announced in the Budget this year that the government will work in "mission mode" to eliminate sickle cell anaemia by 2047. Research and screening programmes have found that the prevalence of haemoglobinopathies — disorders of the blood — is more among tribal populations than non-tribal communities in India. Sickle cell anaemia is a genetic disorder, making complete "elimination" a challenge that requires major scientific breakthrough.

By 2026, Indian industry will be able to manufacture every year solar modules that can generate 100 gigawatts of power, and help the country be a net exporter of solar power. This will significantly aid India's target of installing 500 GW of electricity capacity from non-fossil sources by 2030, Bhupinder Bhalla, Secretary,

GROUP OF LUNAR METEORITES THROW LIGHT ON THE ORIGIN OF BASALTS ON THE MOON: ISRO

1. A team of scientists from Ahmedabad-based Physical Research Laboratory (PRL), the United States, and Japan has found a unique group of ancient lunar basaltic meteorites, suggesting a new scenario for the origin of lunar basalts.
2. **More about the findings:** The Apollo, Luna, and Chang'E-5 missions have brought to Earth an extensive collection of mare basalts. Mare basalts are formed by the partial melting of the lunar mantle, made of mostly pyroxene and olivine. Apollo mare basalts are highly rich in potassium, rare earth elements, and phosphorous known as Procellarum KREEP Terrane (PKT). 3.KREEP is the acronym for a place that has deposits of potassium (chemical symbol – K), rare earth elements (REE), and phosphorus (chemical symbol – P). These are rich in radioactive elements that provide the heat to melt rocks resulting in KREEP-rich basalts.
4. ISRO stated that the result shows that these basalts must be a result of low-pressure melting on the Moon, like those in other terrestrial bodies, such as Earth and Mars. They also reveal that these basalts originated from a cool, shallow, and compositionally distinct part of the lunar interior.

SPECIAL MARRIAGE ACT

1. Recently several interfaith couples including some celebrities chose to marry under a secular personal law i.e., through the Special Marriage Act, of 1954.
2. **About Special Marriage Act, 1954:** The Special Marriage Act of 1954 (SMA) was passed by Parliament on October 9, 1954. It governs a civil marriage where the state sanctions the marriage rather than the religion.
3. **Need for such an act:** Laws, such as the Muslim Marriage Act, of 1954, and the Hindu Marriage Act, of 1955, require either spouse to convert to the religion of the other before marriage. However, the SMA enables marriage between inter-faith or inter-caste couples without them giving up their religious identity or resorting to conversion.
4. **Who can get married under the Special Marriage Act?** The applicability of the Act extends to the people of all faiths, including Hindus, Muslims, Sikhs, Christians, Sikhs, Jains, and Buddhists, across India. The minimum age to get married under the SMA is 21 years for males and 18 years for females.
5. What is the procedure for a civil marriage? As per Section 5 of the Act, the parties to the marriage are required to give a notice, in writing, to a "Marriage Officer" of the district in which at least one of the parties has resided for at least 30 days immediately preceding the notice. The parties and three witnesses are required to sign a declaration form before the Marriage Officer. Once the declaration is accepted, the parties will be given a "Certificate of marriage" which is essentially proof of the marriage.

HALLUCINATING CHATBOTS

1. Google warned of the pitfalls of artificial intelligence (AI) in chatbots, as it can sometimes lead to "hallucination". Background: These reports emerged as OpenAI (ChatGPT), Google (Bard), and Microsoft (Bing's beta) were opening up their AI-enabled chatbots for test users.
2. **What are hallucinating chatbots?** AI chatbots are trained to have human-like conversations using a process known as natural language processing (NLP). With NLP, they can interpret human language as it is written, which enables them to operate more or less on their own. Hallucination in AI chatbots is when a machine provides convincing but completely made-up answers (untrue facts). It is not a new phenomenon. For example, after being live on Twitter for just 24 hours in 2016, Microsoft's chatbot Tay started parroting racist and misogynistic slurs back at users.
3. **Why do AI chatbots start hallucinating?** Because these models require the capability to rephrase, summarise and present intricate tracts of text without constraints. Facts, not being sacred, can be treated in contextual form when sifting through the information, as these models are unable to distinguish between contextual information and facts. For example, when asked, "What does Albert Einstein say about black holes?" AI models can return a quote made famous on the Internet rather than factual information. The problem becomes acute when complex grammar source material is used. The biggest challenge: Identification of hallucinated texts. 4. Way forward: A method to recognize hallucinated output and include filters in AI

Ministry for New and Renewable Energy, told.

25.5 percentage by which net interest income of banks grew in the December quarter year-on-year to ₹1.78 lakh crore, driven by a healthy credit offtake and a higher yield on advances. Net interest margin also rose by 17 basis points to 3.28% as banks repriced existing loans higher at a faster rate, according to an analysis by Care Ratings.

38 per cent drop in mutual funds' collection through new fund offerings (NFOs) in 2022 over 2021, with asset management companies (AMCs) garnering over ₹62,000 crore through new schemes. However, higher number of NFOs were launched in 2022 compared to the preceding year. A total of 228 new schemes were floated last year.

124 lakh tonnes, the quantity to which Maharashtra sugar production may fall in 2022-23 from 137.28 lakh tonnes in 2021-22 due to adverse climatic conditions in different parts of the State. Continuous rains rendered the ground wet for long periods which impacted sugarcane cultivation, Sugar Commissioner Shekhar Gaikwad said.

15,000 number of organ transplants in 2022 according to Union Health Secretary Rajesh Bhushan. There was an annual increase of 27% in the transplant numbers, he said. Mr. Bhushan also stressed the need for rational use of the country's technical manpower.

As aircraft carrier INS Vikramaditya gets ready to sail out of the dockyard after a long refit, the Indian Navy is finalising plans to repeat the order for an INS Vikrant size Indigenous Aircraft Carrier (IAC)-2, with some modifications, which, given the long timelines, may be close to the time INS Vikramaditya leaves service, effectively becoming its replacement. While placing a repeat order for the INS Vikrant sized carrier, the Navy will continue to study the need for a larger and more capable carrier, according to the Navy chief, Admiral R. Hari Kumar.

The Gujarat government appointed Special Investigation Team (SIT) has found in its preliminary probe that corrosion on nearly half of the wires on a cable and welding of old suspenders with new ones were some of the major faults that led to the collapse of the suspension bridge in Morbi last year in which 135 people were killed.

models to recognize and eliminate such texts is being researched. Tabulate and collect hallucinated texts from AI models.

REPORT ALLEGES CONFLICT OF INTEREST BEHIND INDIA'S FORTIFIED FOOD PROGRAMME

1. The public food fortification programme under India's food safety regulator (FSSAI) has come under scanner after a report alleged conflicts of interest behind it. Background: The mandates of the Food Safety and Standards Authority of India (FSSAI) and the Food Fortification Resource Centre (FFRC) – an industry-led organisation under the FSSAI, are the opposite.
2. FSSAI – a statutory body, is supposed to be guided by principles of food safety, which include risk assessment, transparent public consultation, protection of consumer choice, etc. FFRC, on the other hand, has a sponsored promotional role – co-implementing fortification programmes, providing funding and advisory services, etc. The presence of FFRC within FSSAI deserves further investigation and intervention to avoid conflict of interest.
3. **Food Fortification:** Meaning: It is defined as the practice of adding vitamins and minerals to commonly consumed foods during processing to increase their nutritional value. The Copenhagen Consensus ranked food fortification as one of the most cost-effective development priorities. It has been identified as the strategy by the WHO and FAO for decreasing the incidence of nutrient deficiencies at the global level.
4. **Major issues with food fortification in India:** The one-sided portrayal of fortification as a 'cure-all' without any significant scientific perspective and evidence on fortification. No independent risk analysis: FSSAI's statutory regulations caution against consuming iron-fortified food by patients with thalassemia and sickle cell anaemia. Conflict of interest: The studies which FSSAI relies on to promote fortification are sponsored by food companies. Evaluation studies are still not publicly available.

FEATHERING

1. A preliminary report by the Aircraft Accident Investigation Commission of Nepal on the crash of a Yeti Airlines ATR 72-500 brought to light that the propellers of the plane were found in an unusual "feathered" position.
2. What is 'feathering'? In simple terms, Sometimes an aeroplane's engine stops working while it's flying. In an aeroplane with a propeller, the pilot can change the angle of the propeller blades so they cut through the air more efficiently. This is called "feathering" the propellers. Feathering helps the aeroplane glide farther and stay at a safe speed.
3. When pilots have to make an emergency landing, they often use feathering to help them. If the propellers keep spinning even when the engine is off, it can be dangerous if the aeroplane is flying low, but it can actually help restart the engine if the aeroplane is flying high.

REAIM 2023

1. World's first global summit on Responsible AI in the Military kicks off in The Netherlands. The REAIM 2023 brings together governments, corporations, academia, startups, and civil societies to raise awareness, discuss issues, and possibly, agree on common principles for deploying and using AI in armed conflicts.
2. Role of AI in military domain Training and simulation to provide battlefield experience to soldiers. Surveillance, specifically in difficult-to-reach border regions, provides situational awareness.
3. Ethical risks: The distinction between civil and military assets and populations, the principle of proportionality of force deployment is compromised. Data biases.



"Timing is important, if you start running before others you appear faster but you are not in the race."

DR. KHAN
(KSG)