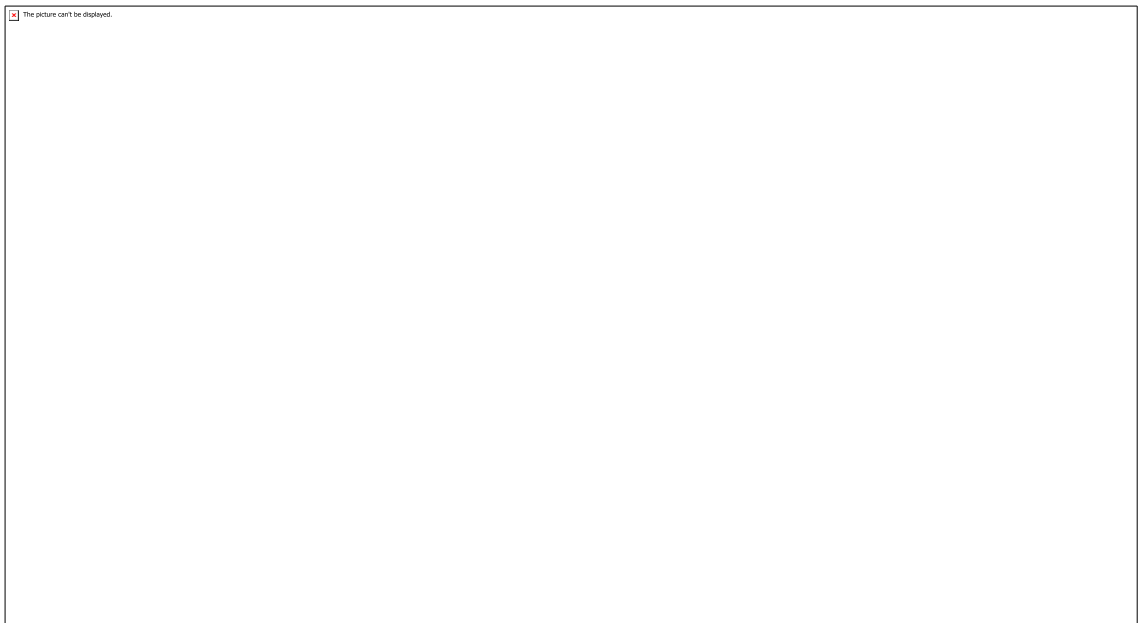


Department of Data Science
Weekly Data Science Bytes

**IISc researchers develop new imaging method to detect
tumours**



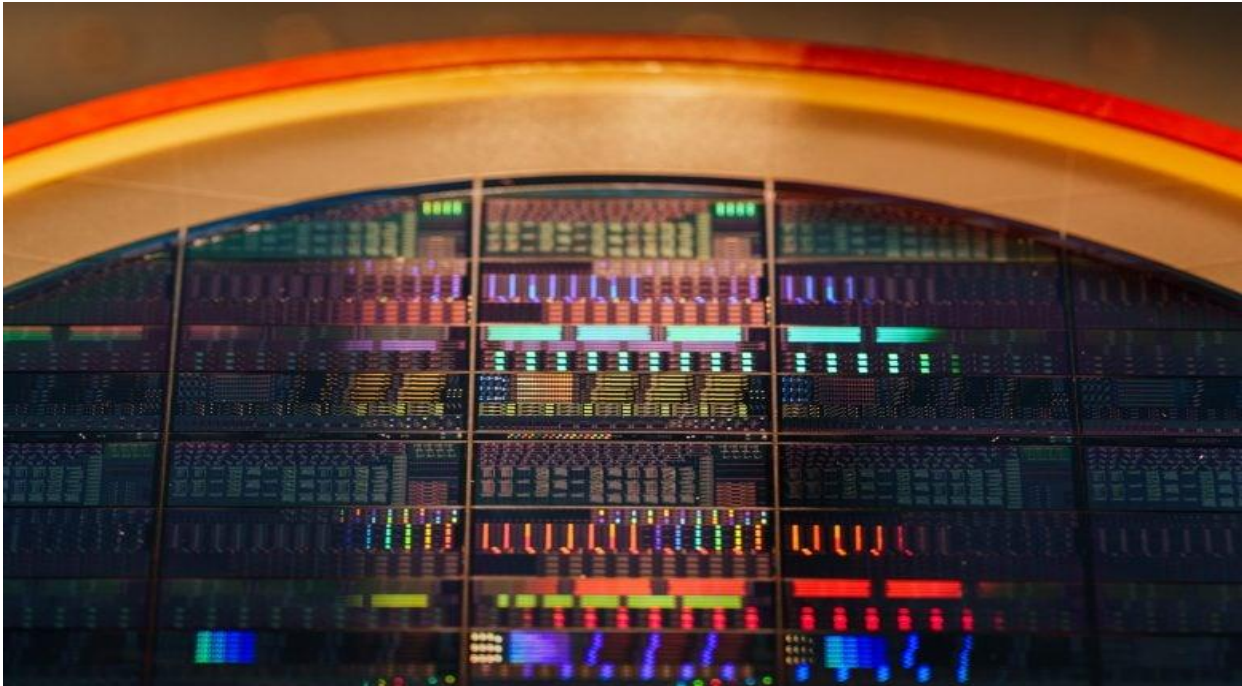
- Researchers at the Indian Institute of Science (IISc) in Bengaluru have developed a new imaging molecule that could help detect tumours accurately, at a fraction of the cost of current methods and without the risks associated with repeated radiation exposure.
- The molecule, called GPc, is created by scientists from the Department of Bioengineering at IISc and designed for use with Photoacoustic (PA) Tomography, a relatively new imaging technique. Their work could open the door to safer and more affordable tumour detection, especially for tumours located close to the body's surface.

India's 1st quantum computer operational in Bengaluru



- Karnataka Minister for Science and Technology NS Boseraju said India's first quantum computer is already operational in Bengaluru, and Karnataka is leading the country in quantum innovation. The minister was responding to Andhra Pradesh Chief Minister Chandrababu Naidu's tweet stating that Andhra Pradesh is set to deploy India's first indigenously built 8-qubit quantum computer this November in Amaravati.
- "While celebrating our progress, we must also cultivate a culture of considering facts and figures," the minister stated in a sharp response to Naidu's claims.

Chiplet Technology Becomes Sandia's Secret Weapon for AI and Quantum



- Sandia hopes to help change that. It recently became the first national lab to join the U.S. National Semiconductor Technology Center. The NSTC was established under the CHIPS and Science Act to accelerate innovation and address some of the country's most pressing technology challenges.
- "We have pioneered the way for other labs to join," said Mary Monson, Sandia's senior manager of Technology Partnerships and Business Development. "The CHIPS Act has brought the band back together, you could say. By including the national labs, U.S. companies, and academia, it's really a force multiplier
- "The big goal is to strengthen capabilities. Industry is moving fast, so we are keeping abreast of everything happening and incorporating what will help us deliver more efficiently on our national security mission. It's about looking at innovative ways of partnering and expediting the process," Monson said.

Source: <https://scitechdaily.com/chiplet-technology-becomes-sandias-secret-weapon-for-ai-and-quantum/>

AI Captures Once-in-a-Lifetime Supernova That Glowed

Twice



AI helped uncover a one-of-a-kind stellar explosion, where a black hole may have triggered or destroyed its companion star.

- Astronomers using an AI-powered system led by UC Santa Cruz caught a rare stellar explosion, known as SN 2023zkd, just hours after it began. This early detection made it possible to gather crucial observations before the short-lived blast faded from view.
- Evidence points to a dramatic cause: the star's violent interaction with a nearby black hole. The black hole may have partly consumed the star, triggering the explosion, or completely shredded it before it could detonate on its own.
- Scientists note that the same kind of real-time AI anomaly detection could eventually transform other areas of life, from spotting diseases earlier to preventing financial fraud and even strengthening national security.

Source: <https://scitechdaily.com/ai-captures-once-in-a-lifetime-supernova-that-glowed-twice/>

**Very worried about China', says OpenAI CEO Sam Altman
with a warning for America and the new 'China-Safe' chips
policy**



- China's advancements in artificial intelligence. During a rare on-the-record briefing with a small group of reporters, Altman said that relying on export controls alone is likely not a reliable solution to the geopolitical AI race. "I'm worried about China," Altman stated, speaking over Mediterranean tapas in San Francisco's Presidio, last week.
- According to a report in CNBC, he emphasized that the US– China AI race is deeply entangled, encompassing more than just who is ahead on a simple scoreboard. Sam Altman detailed the various layers of the AI landscape, including inference capacity, research, and product development. "I don't think it'll be as simple as: Is the US or China ahead?" he said, adding that China might be able to build inference capacity faster. 'China-Safe' chips policy not enough Despite the escalating US export controls on semiconductors, Altman expressed skepticism that these policies are keeping up with the technical reality. When asked if it would be reassuring to have fewer GPUs reaching China, he responded, "My instinct is that doesn't work."