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'Quantum leap' in secure communication: Germany transmits photons from aircraft

By Aman Tripathi, October 10, 2025

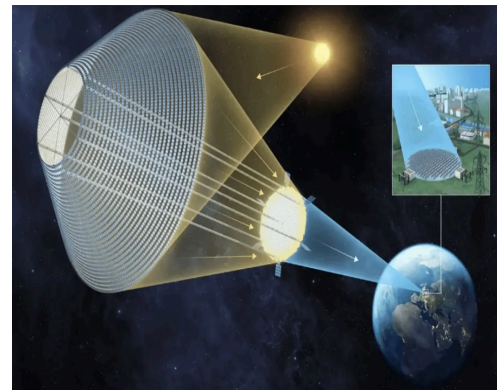
A consortium of German researchers has successfully transmitted individual photons from a moving aircraft, captured them in a mobile ground station, and verified their quantum states. The experiment, a key part of Germany's QuNET initiative, marks a critical step towards building a global, tap-proof quantum communication network. The research team successfully measured various quantum channels between the aircraft and the ground, sent the light particles to a sophisticated ion trap, and tested technologies vital for quantum key distribution (QKD).



Satellite internet is here. A startup is now promising on-demand sunlight at night

By Nadeem Sarwar, October 12, 2025

Internet beamed from satellites is slowly going mainstream. Just a week ago, T-Mobile announced that its T-Satellite service now supports Google Maps, WhatsApp, X, and a bunch of other apps. AT&T and Verizon are already in line, while SpaceX and Amazon are also pushing their respective satellite communication projects. Now, a US-based startup wants to go a step further and beam sunlight in dark hours, for a price.



Blue Origin's new Glenn set to launch NASA's ESCAPEDE Mars Mission in late 2025

By Saumya Nigam, October 12, 2025

New Delhi: Blue Origin, the private space company founded by Jeff Bezos, is gearing up for the next launch of its New Glenn rocket, which will carry NASA's ESCAPEDE mission to Mars. Earlier this month, the company successfully transported the first stage of its second New Glenn (NG-2) rocket to the launch pad at Cape Canaveral, Florida. The mission is expected to launch in late October or early November 2025.



[N Chandrasekaran gets historic extension as Tata bets big on semiconductors, EVs, and Air India](#)

By Kala Vijayragh, October 13, 2025

Mumbai: In the first ever departure from the Tata Group's retirement policy, the Tata Trusts approved a third executive term for N Chandrasekaran, chairman of Tata Sons, said people aware of the matter. Chandrasekaran will be 65 when he ends his second term in February 2027. Under group rules, executives are expected to step down from such roles at 65 although they can remain in non-executive capacities until 70.



['Nanoseconds behind': Nvidia's Jensen Huang sounds alarm on China's semiconductor tech vs US](#)

By Subhankar Paul, October 12, 2025

In a striking assessment that underscores the narrowing gap in global tech supremacy, Nvidia CEO Jensen Huang has warned that China's semiconductor technology is now only "nanoseconds behind" the US, signaling an era where Beijing could soon rival Washington in the race for AI hardware dominance.



[Exercise Cold Start displays indigenous drone technology, lessons to shape doctrine](#)

By Mayank Singh, October 12, 2025

NEW DELHI: The first-ever tri-services military exercise held to simulate aerial threats and defense responses turned out to be a major display of indigenous capabilities. "The drones, unmanned aerial vehicles, and the defense responses, including counter-drone and jamming equipment have been largely produced in India," sources said. The exercise aimed to bring together all stakeholders, the Army, Navy, and Air Force, to simulate all possible scenarios and employ their countermeasures "to stay ahead of adversaries, drawing lessons from Operation Sindoor," the source added.



[Watch SpaceX launch 24 of Amazon's Project Kuiper internet satellites on Monday after delay](#)

By Mike Wall, October 13, 2025

Amazon's Project Kuiper broadband megaconstellation continues to grow. Twenty-four more Project Kuiper satellites are scheduled to take flight on Monday (Oct. 13), lifting off from Florida's Cape Canaveral Space Force Station atop a SpaceX Falcon 9 rocket at 7:58 p.m. EDT (2358 GMT). Launch was originally scheduled for Thursday evening (Oct. 9), but SpaceX has now pushed that back by four days.



News Articles

The Cage Without Bars

Artificial intelligence is turning the unknown into a rounding error — and the extraordinary into an anomaly



NISHANT SAHDEV

For years, one image has stayed with me: a dog in a cage. At first it fights to escape, scratching at the bars and whining at the shocks that come without warning. Then, slowly, it stops. Even when the door is left ajar, the animal does nothing. It has learned a terrible lesson — that the world is fixed, pain inevitable, effort pointless.

This classic psychology experiment was meant to illuminate learned helplessness. I have come to believe it now illuminates something else entirely: the future being built by artificial intelligence. The cage is no longer metal and visible; it is data — driven and everywhere. And, disturbingly, it is one we are building for ourselves.

Machines of Prediction, Not Imagination:

We like to speak of AI as if it were an alien intelligence poised to out-think us. Most systems changes our lives today, however, are not intelligent in that way at all. They are machines of prediction.

They learn from patterns in historical data and use those patterns to anticipate what will happen next — who will repay a loan, which tumor will turn malignant, what song we will stream, what would be the market trend and many more. Their power is not reasoning but regularity. They reward what is probable and punish what is not. They thrive on the predictable. That might seem harmless if predictions merely reflected the past. But they do not. They loop back into reality, shaping the very world they describe. When an algorithm decides who is most likely to succeed in a job, it does not just predict the future — it manufactures it, granting opportunity to some while denying it to others.

When predictive policing software labels a neighborhood "high-risk," it justifies heavier patrols and more arrests, generating new data that confirms the original assumption. Bit by bit, our social world bends to fit the contours of its models.



When Prediction Becomes a Cage:

This feedback loop is what transforms a neutral tool into a cage. The more accurate predictions become, the more they constrain behavior. The more constrained behavior becomes, the more accurate predictions appear. Eventually the space for deviation — the space for surprise — collapses. Like the dog that stops trying, we begin to accept the system's boundaries as natural.

The economic consequences are already visible. Credit-scoring algorithms, trained on decades of biased data, learn that borrowers from certain neighborhoods default more often. They respond by raising interest rates or denying loans. That starves those neighborhoods of investment, limits opportunity and perpetuates the very conditions the model "predicted." Innovation dies not because no one has ideas, but because the system has already decided which ideas are worth funding.

Culture follows the same logic. Recommendation engines train us to consume what people like us have liked before. Over time, they become so good at anticipating our tastes that we rarely stray beyond them. Art risks becoming derivative not because artists lack imagination but because the digital marketplace punishes deviation

from expectation. Even dissent — the unpredictable fuel of democracy — is softened by algorithms that feed us the opinions we are most likely to endorse.

The Global Stakes of Predictive Logic

Globally, the picture is starker still. China's Social Credit System uses predictive analytics to anticipate behavior and pre-empt disobedience. Western law-enforcement agencies deploy predictive policing that targets minority neighborhoods. Hiring algorithms quietly shape who advances in corporate



hierarchies. Across domains, prediction is flattening possibility. Surprise, deviation, novelty — the forces that drive discovery and change — are treated as errors to be minimized.

As a physicist, I find this deeply troubling. Nature, at its most profound, is built on surprise. The universe did not unfold from certainty but from fluctuations — from randomness itself. Every major scientific breakthrough, from quantum mechanics to relativity, arose not from extrapolating the past but from questioning it. Yet our most

advanced AI systems, for all their power, cannot do this. They cannot imagine what they have never seen. They cannot ask whether the cage is real.

The Real Threat: A Civilization That Stops Imagining

This is why the greatest danger of AI is not that it will enslave us or out-think us. It is that it will slowly teach us to stop thinking beyond it. A civilization governed by prediction may never need an authoritarian ruler. It will police itself, guided by the comforting tyranny of what the data says is likely. Resistance will feel irrational. Ambition will seem naive. The possible will shrink until it is indistinguishable from the probable.

Some argue that this is the price of efficiency — that prediction makes the world smoother, safer, more optimized. But optimization is not the same as progress. A perfectly optimized world is a stagnant one, a world where the unexpected cannot occur. And it is precisely the unexpected — the anomaly, the outlier, the idea that "shouldn't work" — that drives human advancement. Without surprise, there is no art, no science, no democracy.

Designing for Surprise, Not Just Accuracy

Avoiding the cage requires designing AI differently. Instead of building models that punish deviation, we

should build ones that embrace it — systems that seek anomalies rather than suppress them. Injecting noise and uncertainty into algorithms should not be treated as a bug but as a feature. Diversity in data should matter not only because it is fair but because it is fertile ground for the unexpected. Some researchers are already exploring "curiosity-driven" machine-learning models that reward exploration of the unknown, a small but crucial shift away from mere prediction.

Equally vital is preserving the human capacity for surprise. That means resisting the temptation to let AI mediate every choice, every risk, every curiosity. It means teaching students not only how to use algorithms but how to disobey them. It means celebrating the improbable scientific result, the unpopular opinion, the work of art no one saw coming — not as glitches in the system but as evidence that we are still alive and still capable of imagining differently.

The Leap Beyond the Cage

The cage is not inevitable. The dog could have leapt. We can still leap too. But doing so will require a conscious choice: to build a future that values uncertainty, to prize surprise not as a flaw but as the essence of life itself. Artificial intelligence will continue to grow more powerful. It will write, diagnose, predict and optimize with breathtaking precision. But if we allow it to strip the world of surprise, it will also make us smaller. It will build a civilization that forgets how to imagine — a species that no longer reaches for the bars.

The story of the dog in the cage is not about intelligence or strength. It is about belief — about the quiet, corrosive moment when a living being stops believing that anything else is possible. That is the moment we must never reach. The future of AI will not be decided by how smart our machines become, but by how fiercely we defend the unpredictable. If the world becomes nothing but what the data expects, we will have built the most perfect cage imaginable — one so seamless we forget it's there.

Author is a theoretical physicist at the University of North Carolina, United States.

Source: Pioneer Delhi Newspaper, 13-10-2025
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Link: https://drive.google.com/file/d/1GaAutYaMGRnLU_H7Y_AHuUgnhewuWwO2/view

Pros and cons of AI in learning process

THE PLAN TO introduce AI in schools is a welcome initiative—one that has the potential to transform education and empower the children with the abilities to excel in their lives. However, there are several questions that arise around its use, the training of teachers and the impact on children's learning abilities. AI is still a mystery for the general public at large and its specific role in teaching-learning is yet to be fully understood and facilitated in schools. Generative AI, which is relatively easier to experience and access by most teachers, has begun to be used by some of them to design the curriculum or seek clarifications for topics or help with assessment.

Creating familiarity with AI amongst students has to be handled with thoughtfulness and a well designed framework. In the early stages, coding should not be the focus, instead curiosity and observation that should be carefully nurtured among children with logic building activities, games and toys with AI/robotic features. It is at the middle school that children should be exposed to what is AI and reflect upon its examples experienced in their daily lives. This is also the stage where they should be made aware of potential biases and inequity and the importance of continuing with independent thinking and decision making.

AI by virtue of its construct has inherent biases and therefore could influence the young minds and shape their thinking aligned with the AI models. Unsupervised interaction with AI could also mean children could be exposed to the dark elements and be



guided by certain AI models towards their beliefs and value systems which may be contradictory to those held by families or the society.

Seeking help from AI/Gen AI for their homework or assignments would mean surrendering their abilities to think and work independently. The access of AI tools may also lead to giving unfair advantage to certain group of students with better AI literacy or access which may widen the gaps in the learning quotient. Therefore it is vital to reflect upon all of such potential risks and come up with a proper plan for AI immersion with effective guardrails.

To begin with, teachers have to be properly oriented on the risks and help them address these risks with changes in their assessment and assignment processes. Senior students should be alerted on the dangers of

plagiarism and schools should put in place effective tools to identify or prevent such misuse.

Where students use AI, they should be asked to disclose the sources.

AI is a double-edged sword and teachers should be clear about the need to balance its use with accountability and transparency. Unlike most other digital tools, since students would be conditioned to the AI environment in their daily lives, parents and teachers would have to work together to maintain academic trust. They need to collaborate to ensure the precious early stages of children are enriched and not diluted with the arrival of AI in their lives.

The writer is chairperson, GTT Foundation

Source: Financial Express Newspaper, 13-10-2025

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