Department of Data Science
Weekly Data Science Bytes

Science, technology and talent: Pillars of India-Canada renewed partnership

- The Canadian Prime Minister Mark Carney's visit to India should be seen as more than his first bilateral visit since assuming charge; it signals a strategic reset, at the heart of which lies science, technology and innovation. This renewal unfolds against a backdrop of heightened global instability, including the ongoing conflict between Israel and Iran, which highlights the strategic importance of key energy chokepoints and the potential implications for energy markets, supply chains and regional security.
- The visit, marking 79 years of diplomatic ties between two countries, follows sustained high-level engagements over the past year, including leaders' interaction at the G7 in Kananaskis and the G20 in Johannesburg.

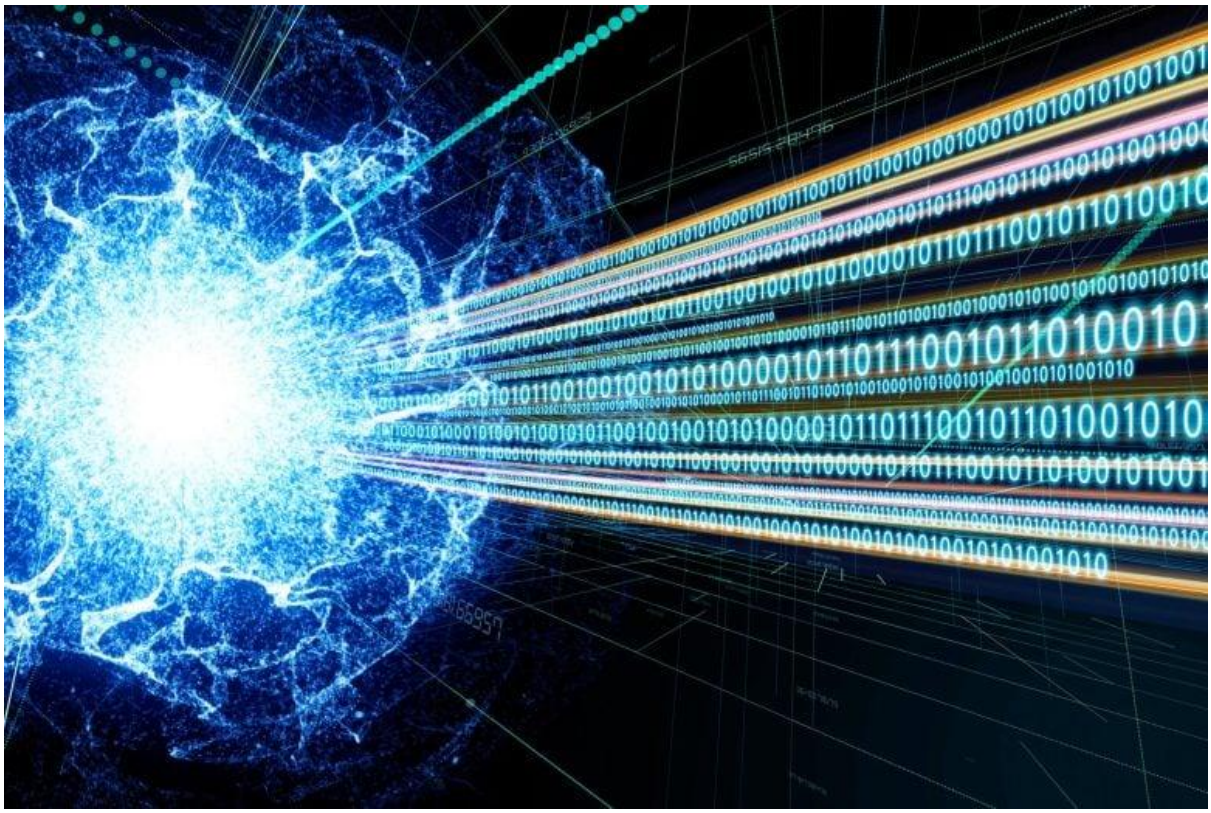
Source: https://www.business-standard.com/economy/analysis/science-technology-and-talent-pillars-of-india-canada-renewed-partnership-126030300942_1.html

Mercedes-Benz India R&D Arm and IIT Delhi Sign Five-Year Research Agreement

- Mercedes-Benz Research and Development India (MBRDI) and the Indian Institute of Technology Delhi (IIT Delhi) have formalised a five-year Master Research Agreement (MRA) to conduct joint research across four technology areas: quantum technologies, future materials, neuromorphic engineering, and electric mobility. The agreement was announced on 5 March 2026 in Bengaluru, and marks one of the more structured long-term tie-ups between a global automotive R&D organisation and an Indian technical institution.
- The MRA establishes a framework for ongoing collaboration rather than a single project, with both parties identifying research themes at the intersection of fundamental science and applied engineering. The four focus areas reflect priorities that the automotive industry has been navigating as it transitions toward electrification, software-defined vehicles, and more computationally intensive systems.

Source: https://www.autocarpro.in/news/mercedes-benz-india-rd-arm-and-iit-delhi-sign-five-year-research-agreement-131487

Scientists May Have Found the "Holy Grail" of Quantum Computing



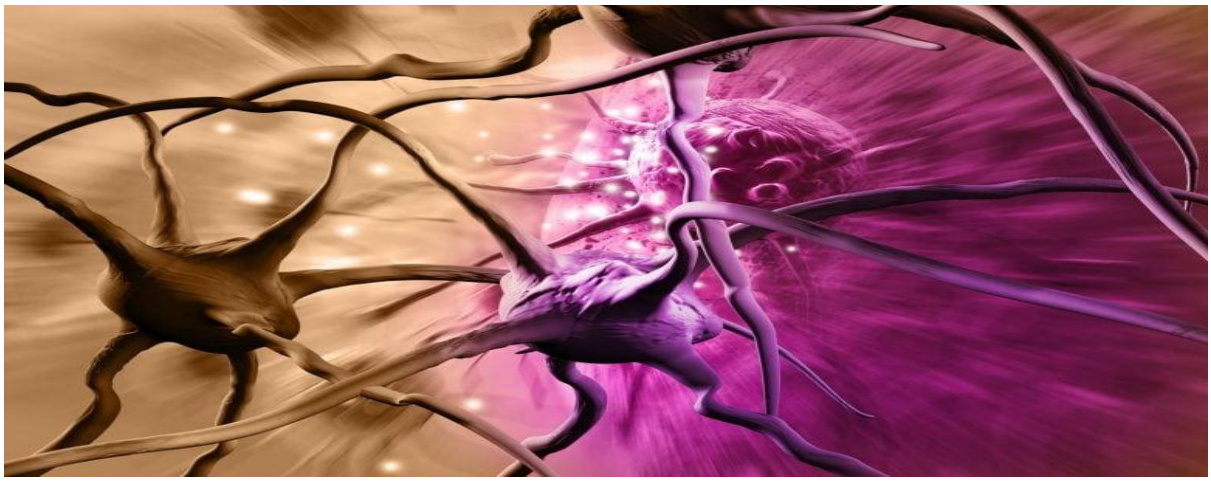
- Physicists have searched for decades for materials known as triplet superconductors because of their potential to enable extremely energy-efficient technologies. These materials are widely regarded as one of the most important missing pieces in advanced solid-state physics.

- "A triplet superconductor is high on the wish list of many physicists working in the field of solid-state physics," said Professor Jacob Linder.

- Linder is based at the Norwegian University of Science and Technology's (NTNU) Department of Physics, where he works at QuSpin—a research center that brings together some of the university's leading experts in quantum materials.

Source: https://scitechdaily.com/scientists-may-have-found-the-holy-grail-of-quantum-computing/

Virus Therapy Supercharges Immune Attack on Brain Cancer



- Researchers from Mass General Brigham and Dana-Farber Cancer Institute report that a single dose of an oncolytic virus can help the immune system gain access to aggressive brain tumors. Oncolytic viruses are genetically engineered to infect and destroy cancer cells while sparing healthy tissue.
- In findings published in *Cell*, the team describes how this strategy extended survival in patients with glioblastoma, the most common and deadliest primary brain cancer, during a recent clinical trial.

Source: https://scitechdaily.com/virus-therapy-supercharges-immune-attack-on-brain-cancer/

When Software Builds Software: What Developers Must Learn Now

Akhil George & Sujit John | TNN

Artificial intelligence has generated both excitement and anxiety among students, fresh graduates and mid-career professionals, particularly in software development. Coding, built on structured logic and repeatable patterns, has proved especially amenable to AI training. As models grow more capable of generating, testing and even debugging code, many are asking a blunt question: what exactly should a software professional now learn to remain relevant?

Vishal Chahal, VP at IBM India Software Labs, argues that the answer is not to compete with machines on speed, nor to abandon programming fundamentals. It is to elevate one's thinking. "AI is redefining software. Coding is only one part of the software life cycle." Design, architecture, deployment, support and continuous improvement remain firmly in human hands. "AI is redefining what you will do in your job (as a software developer)".

AI CAREER EDGE

The productivity gains are real and this has implications. In Chahal's own experience, developers can see "at least a 30 percent uplift in daily coding tasks". Essentially, software can be built "much faster", test cases can be generated more quickly, and iteration cycles have shrunk. This means teams can now experiment more freely because they can fail fast and try again without the same cost in time.

The deeper shift lies in how engineers think. "Instead of spending your time writing code line by line, you should be thinking about systems," he says. "How am I designing this system? What solution am I trying to achieve?" Once that clarity exists, structured prompts can guide AI tools to generate much of the code. For students, the message is not to discard programming languages either, even if AI can write much of the code. "We must continue to learn the fundamentals," Chahal says. Understanding how software interacts with hardware, how programming languages translate into machine instructions and how systems behave under load remains essential. AI-generated code still needs to be understood, validated and improved.

> AI is not taking away jobs; it is redefining what you will do in your job. Software development is not just about coding — coding is only one part of the life cycle. The super skill now is how you convert a requirement into a solution and then into a structured prompt. Practise every day, stay updated, and never neglect your fundamentals.
>
> **Vishal Chahal** | VP, IBM INDIA SOFTWARE LABS

However, "coding itself is no longer the super skill," he adds. "The super skill is the ability to take a requirement, turn it into a solution, and then express that solution clearly through structured prompts."

Vague instructions will yield vague results. "If you say 'write a good JavaScript program', that means nothing. You must define what 'good' means — secure, efficient, scalable, compliant. You must specify the constraints."

Chahal cautions strongly against intellectual complacency as well. "If you offload all your thinking to these tools at the start of your career, you will not develop the ability to design complex enterprise systems." Building prototypes with AI is one thing, designing mission-critical digital infrastructure is another. Architectural judgement in this space is built through understanding gained over many years at the workplace.

Security and governance, he argues, are also now becoming foundational skills. With AI generating code and developers pulling from open-source repositories, risks multiply. "You must know how to build secure, governed solutions," he says. Engineers should be able to scan for vulnerabilities, detect data leaks and apply responsible AI principles.

Chahal rejects the idea that entry-level roles are disappearing. "Jobs are not going away. They are transforming," he says. Which is why Chahal and his team at IBM now look out for candidates who are adaptable. "The hunger to learn and the ability to unlearn. That's what we look for." he says. Linear, narowly defined career paths matter a lot less than evidence of flexibility — shifting domains at work, learning new tools and embracing change. Chahal's advice is to try and highlight these competencies in your resume if you have them.

For both young and mid-career professionals, his other bit of advice is to practice daily. "Spend half an hour or an hour every day using these AI tools." The objective is to be intimately familiar with them — to understand the nuances of these AI models, their limitations, and their rapid evolution. Those who stay close to the change will recognise the shifts between one wave of models and the next and will be able to adapt in a cutthroat jobs marketplace more effectively because of it.

Claude AI Faces its 2nd Outage in 24 Hrs

AI chatbot affected across multiple regions ahead of DeepSeek 4 launch

Tanya Pandey

New Delhi: Anthropic's artificial intelligence (AI) chatbot Claude suffered its second outage in 24 hours on Tuesday, affecting users across multiple regions including the United States and India. According to outage tracking platforms, more than 4,000 users in the US and around 300 in India reported problems as the service experienced a surge in errors.

The US-headquartered company acknowledged the issue on its official status page, saying some API (application programme interface) methods were not working and that its engineering team had moved into active investigation mode.

The first "Investigating" notice was issued at 17:19 pm India time after a raft of error reports. In a follow-up update, Anthropic clarified that the Claude API was working as intended and that the issues were limited to Claude.ai, particularly the login and logout paths.

Users reported being unable to access chat sessions, log in to their accounts or continue existing workflows. The disruption came just a day after a previous outage affected the platform.

An executive at an Indian cloud services company suggested that the surge in traffic might be linked to increased user activity from China ahead of the scheduled release of the next-generation AI model DeepSeek 4.

HEAD SCRATCHER

GIRL IN CHAIR BY PABLO PICASSO