Department of Data Science

Weekly Data Science Bytes

China used Russian technology to build world's largest navy capable of challenging US

- China today operates the **world's largest navy by hull count**. A portion of its surface combatants and submarines was acquired from Russia decades ago, before Beijing achieved its own technological breakthrough in naval shipbuilding, Newsweek reports.

- China and Russia have formed what Russian President Vladimir Putin once described as a **"partnership without limits."** The two states now coordinate efforts to counter US-led military and political alliances in both **Europe and the Indo-Pacific region**.

- However, according to Australian naval analyst Alex Luck, the **remaining** Russian-built systems within China's navy are likely to be phased out over the next one to two decades, gradually replaced by fully indigenous Chinese designs.

Source: https://euromaidanpress.com/2026/02/02/china-used-russian-technology-to-built-worlds-largest-navy-capable-of-challenging-us/

Toyota to open world's first robot city later this year, and other technology news you need to know

- Toyota is set to open the world's first robot city later this year. Located at the base of Mount Fuji near Tokyo, Woven City will serve as a test-bed for new mobility, infrastructure and sustainable technologies.
- First announced in 2020, the Toyota Motor Corporation expects to welcome 100 residents - mostly made up of Toyota and Woven by Toyota (WbyT) employees and their families - by the autumn, before expanding to 360 people during Phase I as external inventors and other groups are invited in.
- Built on the former grounds of the Higashi-Fuji plant, resident groups will be largely made up of inventors who are designing the new technologies and 'weavers' who will use the systems daily and provide feedback on their functionality.

Source: https://www.weforum.org/stories/2025/06/toyota-robots-drones-technology-news-june-2025/

LOOK AHEAD, LOOK BEHIND Day 2 Dwelt On Envisaging Future Technology And Erasing Outdated Perceptions

WHAT'S VISION 2035 ABOUT?

Flying cars, virtual courts, wearable devices

Vishwa Mohan | TNN

India's technology think tank under the ministry of science and technology has come out with Technology Vision 2035 on Day 2 of the 103rd Indian Science Congress in Mysuru. The document identifies areas of challenges and how it can be dealt with through technological interventions while realizing the dream of a developed India by 2035.

The think tank – Technology Information, Forecasting and Assessment Council (TIFAC) – in the Vision document enlists a 12 sectoral technology roadmap for India, giving details of technologies that already exist but need to be deployed; technologies in pilot stage that must be scaled up and technologies in the R&D stage. It talks about many future technologies, ranging from flying cars, real-time translation, personalized medicine, wearable devices, e-sensing (e-nose and e-tongue) to 100% recyclable materials among others which may be used in different areas to solve day-to-day problems.

"The trajectories delineated as part of this 'Technology Vision 2035' along with its actualization would not only lead to the desired quality of life for citizens but also boost our comprehensive national power," said PM Narendra Modi in his foreword to the

Pics: Nethra Raju

FUTURE PERFECT: Children take a selfie break at the congress

VISION 2035: FUTURE TECH FOR INDIA

KEY SECTORS AND FUTURE TECHNOLOGIES

EDUCATION
- **3D printing:** To reduce material wastage and create complex objects
- **Artificial Intelligence:** Capability of a machine to imitate intelligent human behaviour
- **Real-time translation**
- **Gesture recognition**
- **Machine vision**

ENERGY

Renewable: Pyrolysis, gasification, yeast/enzyme-based conversion to high-quality fuels

Nuclear energy: Thorium-based power reactor

Rural energy technologies: Micro wind turbines and micro grids for energy distribution

Energy storage: Super capacitor, nickel battery and fuel cell

Coal: Advanced cleaner technologies

HEALTH
- Personalised medicines
- Wearable devices
- Robotic surgical system
- Regenerative medicines
- Digital health delivery

TRANSPORTATION
- Flying cars
- Fuel cell drive train
- Fog vision system
- Flexible and folding vehicles
- Autonomous power train and vehicle train

FOOD AND AGRICULTURE
- Precision agriculture and robotic farming
- **Bio-fortification:** Process by which nutritional quality of food crops is improved
- **Hydroponics:** Method to grow plants using mineral nutrient solutions in water without soil
- **Vertical farming:** Cultivating food within a skyscraper greenhouse
- Biological control of pests & diseases

MANUFACTURING
- Water-less processes
- Zero-emission processes
- Noise- and odour-free production
- **Bio-concrete:** It is a self-healing concrete; it is a material which can successfully re-mediate cracks in concrete
- Precision manufacturing

Deepfakes spreading and more AI companions': seven takeaways from the latest artificial intelligence safety report

- The International AI Safety report is an annual survey of technological progress and the risks it is creating across multiple areas, from deepfakes to the jobs market.
- Commissioned at the 2023 global AI safety summit, it is chaired by the Canadian computer scientist Yoshua Bengio, who describes the "daunting challenges" posed by rapid developments in the field. The report is also guided by senior advisers, including Nobel laureates Geoffrey Hinton and Daron Acemoglu.
- Here are some of the key points from the second annual report, published on Tuesday. It stresses that it is a state-of-play document, rather than a vehicle for making specific policy recommendations to governments. Nonetheless, it is likely to help frame the debate for policymakers, tech executives and NGOs attending the next global AI summit in India this month.

Source: https://www.theguardian.com/technology/2026/feb/03/deepfakes-ai-companions-artificial-intelligence-safety-report

Scientists Identify Key Protein That Could Reverse Brain Aging

A newly identified protein helps aging brains regenerate neural stem cells.

- Scientists at the Yong Loo Lin School of Medicine, National University of Singapore (NUS Medicine), have identified a molecular switch that helps aging brains maintain their ability to generate new nerve cells.
- The discovery centers on a protein that appears to revive the regenerative potential of neural stem cells, a capacity that typically fades with age and contributes to declining brain function. The findings were published in Science Advances.

Source: https://scitechdaily.com/scientists-identify-key-protein-that-could-reverse-brain-aging/