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### **1. OpenAI's Project Strawberry and the promise of AI's next big breakthrough**

#### **Introduction**

OpenAI, the world's premier artificial intelligence research organisation, will likely release its most powerful AI model this fall (September-November), and could integrate it into ChatGPT-5, the new version of the chatbot and virtual assistant that it launched in late 2022.



The secretive project, on which OpenAI has been working for long, was earlier known as Project Q\* (Q-star), and is now codenamed Project Strawberry. It is expected to feature autonomous Internet research and dramatically improve AI reasoning capabilities, and has been billed as OpenAI's push to create Artificial General Intelligence — AI with capabilities similar to that of the human brain.

On August 7, OpenAI CEO Sam Altman posted an image of strawberries growing in two pots to his X account. The tweet was seen as confirmation that OpenAI is working on the new and powerful large language model (LLM).

OpenAI was reported to have demonstrated a version of the new model to national security officials, seemingly a statement of its commitment to transparency at a time when the rapid development of AI has raised serious security concerns among national governments.

### **A wizard at math**

The influential California-based tech industry business publication The Information reported on August 26 that Project Strawberry would be better at math and programming than any existing chatbot, quoting "two people who have been involved in the effort".

Integration with ChatGPT will make the latter the most powerful AI chatbot there is, the report said. ChatGPT has sometimes struggled with math, and experts think the errors could be due to the absence of adequate mathematical information in the training data.

The Information report said that a demo by Project Strawberry staff had shown that the new AI model is capable of advanced levels of thinking, which allowed it to solve puzzles, including The New York Times 'Connections', a particularly difficult word puzzle.

### **Need for training**

The Information said that Project Strawberry aims to raise more capital, which OpenAI needs for its next-frontier model, codenamed Orion.

The generation of high-quality training data for Orion is believed to be one of Project Strawberry's key applications. This is significant because most of the training data on the Internet has already been used, and there is now a dearth of information that is outside paywalls and authentication, and is free to access for the purpose of training AI models. Indeed, OpenAI has been of late making deals with publications to use their content for training.

Project Orion, which is being designed to outperform GPT-4, could use a combination of Project Strawberry and high-quality synthetic data that would likely reduce errors and hallucinations compared to its predecessors and other AI models.

### **Creating synthetic data**

Altman has said that in order to try out different ways to train AI models, OpenAI has been testing how to generate large amounts of synthetic data. Generative AI models create synthetic data based on real-world data samples. The algorithms learn patterns, correlations, and statistical properties of the sample data; after it is trained, the model can produce statistically identical synthetic data.

The large datasets that AI models rely on could be prone to biases and errors, or could have incomplete or inaccurate information — high-quality synthetic data produced by Project Strawberry can fill gaps in real-world data sets and provide a more wholesome, inclusive, and balanced training set.

Many believe that the use of synthetic data can help make future AI models more neutral and fair, and reduce noise and irrelevant information — thereby improving both the efficiency of training and the accuracy of the model.

### **Big Strawberry leap**

Based on what is known, Project Strawberry's improved reasoning, logic, and the ability to plan and carry out research, could allow the model to autonomously conduct experiments, analyse data, and come up with new hypotheses. This could potentially lead to scientific breakthroughs, including the discovery of new drugs. The models could also offer personalised education, creating educational content and interactive lessons.

Relevance: GS Prelims & Mains Paper III; Science & Technology

Source: Indian Express

## 2. 3 things to know about Brunei Darussalam, with PM Modi's official visit

### Introduction

Prime Minister Narendra Modi landed in Bandar Seri Begawan, the capital of Brunei Darussalam, recently for his official visit to the country. The first Indian PM to visit the Southeast Asian nation, his trip also marks 40 years since India and Brunei officially established diplomatic ties.

The prime minister inaugurated a new Chancery of the High Commission of India and visited the Omar Ali Saifuddien Mosque. Here are three things to know about the country's population, its strategic significance for India, and its leader.



### 1. Brunei's population and Indian diaspora

According to official estimates from 2023, Brunei has a population of 450,500 people. Brunei citizens comprise about 76% of the population, with the remaining being permanent or temporary residents. More than 80% of the population is ethnically Malay or Chinese.

The Ministry of External Affairs said in a press release that the first phase of Indians arriving in Brunei started with the discovery of oil in the 1920s. "Currently, approximately 14,000 Indians are residing in Brunei. The contribution of Indian doctors and teachers to the growth and development of Brunei's healthcare and education sectors has

been well acknowledged," it added.

### 2. Strategic importance of Brunei

Brunei is part of India's 'Act East' Policy and Indo-Pacific Vision.

The 'Act East' Policy was formulated as the next step to the 'Look East' Policy which originated in the 1990s. In a world without the USSR, which India had close historical ties with, India sought to deepen its relations with other countries, like those in Southeast Asia. Northeast Indian states, due to their proximity to Southeast Asia, were to be instrumental in this.

In 2014, the policy was revived as 'Act East', imploring greater action towards solidifying those ties. PM Modi has said the 10-member grouping ASEAN (Association of Southeast Asian Nations) was the "central pillar" of India's Act East Policy. Brunei is also an ASEAN member.

Many Southeast Asian countries have seen rapid economic growth in the last few decades. Therefore, commerce is also central to these ties. Brunei, for instance, is one of the largest oil and gas producers in the region.

The focus on Southeast Asia and the Indo-Pacific also matters in the context of China's ascendancy in world affairs in recent years. Under President Xi Jinping, it has also taken a more authoritarian turn. While China's economic stature gives it much heft in the region, allowing it to fund several projects and give loans to other countries, it has also irked others over issues like its conduct in the South China Sea. India can thus provide a counter to Chinese influence.

### **3. Longest reigning monarch in the world**

Between the 14th and 16th centuries, Brunei Darussalam was the seat of a powerful sultanate. Thus, the current Sultan represents one of the oldest continuously ruling dynasties in the world. Brunei's Sultan Haji Hassanal Bolkiah was crowned as the 29th Sultan of Brunei on August 1, 1968, making him the longest-reigning monarch in the world at present.

The king is equally well-known for his immense wealth. A 2015 Time Magazine article said he reportedly owns more than 600 Rolls-Royces, and his residence — Istana Nurul Iman, the world's largest palace — cost over \$350 million.

According to an article in the BBC, "He is one of the world's richest individuals and in a country where the standard of living is high, appears to enjoy genuine popularity amongst his subjects. More recently however, he has faced criticism over the introduction of Islamic Sharia law in the country."

Relevance: GS Prelims; International Relations

Source: Indian Express

### **3. Why is Google accused of being an illegal monopoly?**

#### **Introduction**

Google, the leading American technology company best known for its popular search engine, has lost a Court case filed against it by the U.S. Department of Justice in 2020 accusing the company of being an illegal monopoly. A U.S. District judge ruled earlier this month that the company indeed misused its dominant position in the market to block competitors from freely offering their services in the market.

#### **Why was Google accused?**



Google comes set up as the default search engine in most new phones, laptops and other electronic devices in the market. The company even pays billions of dollars each year, as a share from its advertisement revenues, to device manufacturers such as Apple, Samsung etc. to be featured as the default search engine in their devices. In fact, Google paid as much as \$20 billion in 2022 to Apple to be featured as the default search on Safari, Apple's default browser. Google has also paid web browser providers such as Mozilla to be featured as the default search engine in their browsers. This practice is advantageous to Google and unfair towards other search engine providers as users could end up sticking to the default search engine in their new devices rather than make the effort required to try out better search engines.



### **Is Google really a monopoly?**

The sheer size of Google, which is the leading search engine in the world with a market share of over 90%, has led many to argue that the company is a monopoly that abuses its dominant market power. Such a dominant position, it is believed, allows Google to dictate terms when it deals with people who want to do business with it or even use its services. Some also note that a big technology company like Google would have far more influence on regulators and the law in general than smaller companies.

Others, including interestingly the judge who ruled against Google in this case, however, have argued that a large market share alone does not make a company a harmful or illegal monopoly. They note that even though it may be very hard to compete against a behemoth like Google due to certain advantages the company naturally enjoys as the market leader, the fact remains that there are still no legal barriers against entry into the market of competitors who want to compete against Google by offering a better product. Further, there is also no guarantee that Google's absolute dominance of the search engine market will last forever. Microsoft's significant dominance of the search engine market came to an end with the advent of Google. The same thing could happen to Google if a competitor offers a better product, they argue. It is also believed that the threat of entry of competitors with better products will keep Google on its toes and limit the extent to which the company can abuse its market power.

Supporters of Google also note that there is nothing wrong with Google sharing ad revenues with device manufacturers such as Apple and Samsung. In their view, the practice of paying to be featured as the default search engine is no different from a company buying key real estate space to gain better visibility. Further, Google's competitors are also free to pay for such privileges. Finally, Google itself has argued that its position as the market leader is not simply due to its ability to pay to be the default search engine but rather due to the superiority of its service.

**What lies ahead?**

Court proceedings on action against Google are expected to begin next month. The Court could order Google to stop sharing ad revenues with companies like Apple to be featured as the default search engine on their devices. It may also mandate that users should be given the choice to pick the default search engine in their browsers. Another possible action by the Court could be to force Google to share information that it holds about user searches, which is believed to be a major reason for Google's superior performance, helping competitors catch up. And while the chances are remote, the Court may also order that Google be broken up into multiple companies so that there is no single dominant player in the market. Finally, Google may decide to appeal against the Court's order.

Relevance: GS Prelims; Economics

Source: The Hindu