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Google to Test AI Chips in Space Under Project Suncatcher

Google is preparing for an early test launch of its AI chips in space under Project Suncatcher to evaluate orbit hardware scaling.

Project Suncatcher is an initiative by Google to test AI hardware survival, cooling systems, and satellite interconnectivity in Earth's orbit.

KEY EXAM POINTS

- **Google** is preparing to launch and test its **AI chips** in space as part of **Project Suncatcher**.
- The company announced Project Suncatcher in **2025** to evaluate scaling **AI hardware** in orbit.
- Google is aiming for an early test launch and targeting its next major project milestone in **2027**.
- The mission enables experts to evaluate hardware survival, thermal **cooling processes**, and **satellite interconnectivity** in space.
- The testing focuses on **low-Earth orbit** (LEO) environments for **machine learning** infrastructure.

DID YOU KNOW..!?

Artificial Intelligence (AI) chips are integrated circuits customized for accelerating **machine learning** workloads.

Low Earth Orbit (LEO) ranges between an altitude of **160 km to 2,000 km** above Earth.

The **IndiaAI Mission** was approved by the Union Cabinet in **March 2024** with a total budget allocation of **₹10,372 crore**.

Microprocessors used in space applications require **Radiation Hardening** (Rad-Hard) technology to resist ionizing radiation.

India's **National Supercomputing Mission** (NSM) was launched in **2015** to build grid-based supercomputing infrastructure.

The **Semiconductor India Program** was launched in **2021** with an outlay of **₹76,000 crore** to boost chip manufacturing.

ISRO successfully launched the **XPoSat** (X-ray Polarimeter Satellite) mission on **January 1, 2024**.

REVISION FLASHCARD

Google's 'Project Suncatcher' tests AI chips, thermal cooling, and satellite interconnectivity in low-Earth orbit.

Syllabus Relevance: Relevant for Group 1 and Group 2 exams under Unit 1 (General Science - Developments in Technology, AI, and Space Science).

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