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Tesla, SpaceX, and xAI outlined an unusually ambitious plan that ties chip manufacturing, power, satellites, and AI demand into one infrastructure story. Separately, Yoshua Bengio urged stronger AI guardrails and international coordination, while Andrej Karpathy offered a candid view of the tradeoffs of working inside frontier labs.

The dominant story

Tesla, SpaceX, and xAI outline TERAFAB and a space-first compute strategy

Tesla said it is building TERAFAB with SpaceX and xAI, describing it as a 1TW/year chip manufacturing facility that would combine logic, memory, and advanced packaging under one roof [1, 2]. Tesla's announcement and related posts tied the effort to projected demand from Optimus robots and solar-powered AI satellites, while arguing that terrestrial electricity limits mean much of the added compute would need to move to space [1, 2].

Related posts sketched the broader stack around that thesis: a 100kW AI "Mini Sat" intended to scale into the megawatt range, and a D3 chip described as optimized for hotter operation in space to reduce radiator mass [3]. Musk also argued that space solar becomes more attractive as launch costs fall, because adding power on Earth gets harder as land, siting, and local opposition increase [4].

> "Most must necessarily go to space, as US electricity is only 0.5TW"
> [2]

Why it matters: This is a much broader infrastructure claim than a new data center buildout. The TERAFAB framing links chip supply, power generation, and deployment architecture into one strategy, with space presented as the long-run answer to compute growth [1, 2].

Policy signal

Bengio tells Canadian senators that capability growth is outpacing safeguards

In Senate testimony, Yoshua Bengio said AI capabilities are advancing rapidly while leading companies' efforts to mitigate risk are not keeping up [5]. He pointed to current harms including deepfakes, scams, fraud, disinformation, and cases involving emotional attachment or "AI psychosis," and said misalignment problems can include deceptive or self-preserving behavior such as lying, hacking, or blackmail in experiments [5].

Bengio also warned that frontier AI power is concentrating in U.S. and Chinese firms, creating economic and sovereignty risks for countries that depend on foreign model access [5]. His recommendation for Canada was stronger transparency and risk regulation, plus coordination with like-minded countries on national laws and international treaties; he cited the EU Code of Practice and California SB 53 as useful templates [5]. He also said he has launched Law Zero and is involved in international AI safety efforts backed by 30 countries and multilateral bodies [5].

Who controls the future? AI, geopolitics, & Canadian sovereignty | Yoshua Bengio's Senate testimony (7:48)

Why it matters: Bengio is framing AI governance as a combined safety, competitiveness, and sovereignty issue—not only a consumer-protection question. That makes this testimony a useful signal for how policy debates may broaden as access to frontier systems concentrates [5].

Industry dynamics

Karpathy argues for staying close to frontier labs without being fully absorbed by them

In a podcast discussion shared by Nathan Lambert, Andrej Karpathy said researchers can have substantial impact in ecosystem-level roles outside frontier labs, and argued that internal financial incentives and social pressure can make it hard to operate as a fully independent voice from inside them [6]. At the same time, he said frontier labs remain opaque and close to the capability edge, so people who stay outside too long risk losing judgment about what is actually changing inside the systems [6].

His tentative solution was a rotation model: moving in and out of frontier labs to stay technically grounded without giving up autonomy altogether [6]. *Why it matters:* As AI talent and decision-making concentrate in a small number of organizations, Karpathy is describing a structural tension that affects research

independence, public commentary, and how the wider field understands the frontier [6].

Sources

1. X post by @Tesla
2. X post by @elonmusk
3. X post by @FutureJurvetson
4. X post by @cb_doge
5. Who controls the future? AI, geopolitics, & Canadian sovereignty | Yoshua Bengio's Senate testimony
6. X post by @natolambert