

# United States Senate

WASHINGTON, DC 20510-3203

April 28, 2025

The Honorable Andrew Ferguson  
Chair  
U.S. Federal Trade Commission  
600 Pennsylvania Avenue NW  
Washington, D.C. 20580

Dear Chair Ferguson:

We write to express concern over the handling of sensitive neural data generated by the rapid development and commercialization of brain-computer interface (BCI) technologies. These systems enable direct communication between an individual's brain and external devices, such as computers or smartphones, by detecting and translating neural activity into commands. Neural data is extremely sensitive and should be accorded the strongest privacy protection.

Unlike other personal data, neural data—captured directly from the human brain—can reveal mental health conditions, emotional states, and cognitive patterns, even when anonymized. This information is not only deeply personal; it is also strategically sensitive. While BCI technologies hold significant medical promise, a 2024 review found that a vast majority of neurotech companies collect users' brain data with few limits, vague policies, and reserve sweeping rights to share it—often without the individual's knowledge or clear consent.<sup>1</sup> Americans' neural data must not be repurposed or transferred, without fully informed, opt-in consent. If an individual uses a BCI device for medical or cognitive support, they should not later learn their brain signals trained an AI system or were sold to third parties. And, we must ensure that Americans' neural data is never transferred to foreign adversaries.

With the market for consumer neurotechnologies growing quickly, and companies like Neuralink pushing rapidly into direct brain-to-device communication, we urge the Federal Trade Commission to act decisively. Specifically:

- Use Section 5 authority of the FTC Act to investigate whether neurotechnology companies are engaging in unfair or deceptive acts or practices related to neural data that may constitute a violation of the Act.
- Invoke Section 6(b) of the FTC Act to compel reporting on data handling, commercial practices, and third-party access across the BCI sector. This should include an assessment of transparency across the ecosystem, including third-party access, broker involvement, and cross-border transfers—especially to entities linked to foreign adversary governments.
- Clarify how existing FTC privacy standards apply to neural data, including whether companies' current disclosures meet all the applicable “clear and conspicuous” requirements—particularly for products used by teens.
- Robustly enforce the Children's Online Privacy Protection Act (COPPA) to protect the privacy of children's neural data.

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<sup>1</sup> Genser, Jared, Stephen Damianos, and Rafael Yuste. Safeguarding Brain Data: Assessing the Privacy Practices of Consumer Neurotechnology Companies. April 2024. <<https://neurorightsfoundation.org/>>.

- Initiate a rulemaking process to establish clear safeguards for neural data, ensuring protections extend beyond existing biometric and health data rules and setting appropriate limits on secondary uses such as AI training or behavioral profiling.
- Ensure that both invasive and non-invasive neurotechnologies—whether classified as wellness, medical, or research—are subject to privacy protective baseline disclosure and transparency standards, even when data is de-identified or anonymized.

The risks posed by the exploitation of sensitive neural data are not hypothetical. The Department of Commerce has determined that Chinese companies are using biotechnology to support military end uses, including “purported brain-control weaponry.”<sup>2</sup> As the market expands, companies across the spectrum—from wellness apps to advanced medical implant developers—are collecting neural signals that may be repurposed beyond their stated use. More needs to be done to address the unique risks, sensitivities, and potential misuse associated with neural data across this broader landscape.

Accordingly, we request the Commission respond within 30 days outlining its current efforts and plans regarding BCI technologies and the protection of neural data.

Sincerely,



Charles E. Schumer  
Democratic Leader



Maria Cantwell  
Ranking Member  
U.S. Senate Committee on Commerce,  
Science, and Transportation



Edward J. Markey  
United States Senator

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<sup>2</sup> Federal Register, Vol. 86, No. 240, “Addition of Certain Entities to the Entity List and Revision of an Entry on the Entity List,” Bureau of Industry and Security, U.S. Department of Commerce, December 17, 2021.

<https://www.govinfo.gov/content/pkg/FR-2021-12-17/html/2021-27406.htm>