Neurorights Foundation

BRIEFING NOTE

U.S. STATE LEGISLATION TO PROTECT NEURAL DATA

Overview

Efforts to enact new laws at the state level in the United States to protect neural data that is collected from neurotechnologies have primarily focused on amending consumer data privacy laws. While the exact approaches have differed, legislation has generally defined "neural data" and extended the protections of state consumer data privacy laws to protect neural data as "sensitive data" or "sensitive personal information." Such safeguards are critical steps to protect consumers who purchase and use neurotechnologies. The case studies that follow – California, Montana, Colorado, and Connecticut – provide four examples of state approaches to adopting these protections. The general approach recommended by the Neurorights Foundation[1] to states considering legislation to protect neural data is then presented.

California

In California, State Senator Josh Becker introduced SB 1223 on February 15, 2024 to amend the state's consumer data privacy law – the California Consumer Privacy Act (CCPA) – by defining "neural data" and protecting it as "sensitive personal information." The bill passed the State Senate on August 31, 2024 on a vote of 38-0 and the State Assembly on August 31, 2024 on a vote of 76-0. Governor Gavin Newsom signed the bill into law on September 28, 2024, and it entered into force on January 1, 2025. The CCPA defines "personal information" as "information that identifies, relates to, describes, is reasonably capable of being associated with, or could reasonably be linked, directly or indirectly, with a particular consumer or household. Personal information includes . . . [s]ensitive personal information."[2] Moreover, under the CCPA, "sensitive personal information" now refers to "personal information that reveals . . . [a] consumer's neural data. 'Neural data' means information that is generated by measuring the activity of a consumer's central or peripheral nervous system, and that is not inferred from nonneural information."[3] The provisions in the California legislation allow users of these technologies to request, delete, correct, and limit the data that neurotechnology companies collect from them, and they can opt out from companies selling or sharing their data. In short, companies in California must treat neural data with sensitivity to prevent undesired disclosures of information or unwarranted violations of privacy.

Montana

In Montana, State Senator Daniel Zolnikov introduced SB-163 on January 15, 2025 to amend the state's Genetic Information Privacy Act to include "neurotechnology data." The bill passed the

[1] The Neurorights Foundation is a non-profit non-partisan organization dedicated to shaping the future of brain science and innovation, where neurotechnologies are leveraged for social good and safeguarded from misuse or abuse.
[2] California Consumer Privacy Act of 2018, CAL. CIV. CODE § 1798.140(v)(1) (effective Jan. 1, 2025).
[3] *Id.*, at § 1798.140(ae).

House on March 26, 2025 on a vote of 99-0 and the Senate on April 3, 2025 on a vote of 49-1. Governor Greg Gianforte signed the bill into law on May 1, 2025, and it will enter into force on October 1, 2025. The legislation defines "neurotechnology" as "devices capable of recording, interpreting, or altering the response of an individual's central or peripheral nervous system to its internal or external environment and includes mental augmentation, which means improving human cognition and behavior through direct recording or manipulation of neural activity by neurotechnology."[4] Thus, unlike the California and Colorada legislation, the Montana legislation also defines "mental augmentation," highlighting technologies that can influence mental function; it was the first legislation in the United States to address the emerging issue of mental augmentation. Moreover, "neurotechnology data" is defined as "information that is captured by neurotechnologies, is generated by measuring the activity of an individual's central or peripheral nervous systems, or is data associated with neural activity, which means the activity of neurons or glial cells in the central or peripheral nervous system, and that is not nonneural information."[5] The legislation further clarifies that "neurotechnology data" does not include "nonneural information," which is "information about the downstream physical effects of neural activity, including b[ut] not limited to pupil dilation, motor activity, and breathing rate."[6] These changes to the Genetic Information Privacy Act extend a wide array of protections provided for genetic data to neurotechnology data.

Colorado

In Colorado, then-State Representative (now State Senator) Cathy Kipp introduced HB 24-1058 on January 10, 2024 to amend the Colorado Privacy Act (CPA) to define and include "neural data" as a category of "sensitive data." The bill passed the House on February 9, 2024 on a vote of 61-1 and the Senate on March 26, 2024 on a vote of 34-0. Governor Jared Polis signed the bill into law on April 17, 2024, and it entered into force on August 7, 2024. Similar to the CCPA, the CPA defines "neural data" as "information that is generated by the measurement of the activity of an individual's central or peripheral nervous systems and that can be processed by or with the assistance of a device."[7] Additionally, "neural data" is included in "biological data," which is "data generated by the technological processing, measurement, or analysis of an individual's biological, genetic, biochemical, physiological, or neural properties, compositions, or activities or of an individual's body or bodily functions, which data is used or intended to be used, singly or in combination with other personal data, for identification purposes."[8] Finally, under the CPA, "sensitive data" includes "biological data."[9] Colorado consumers' "sensitive data" is therefore provided with heightened protections.

Connecticut

In Connecticut, the General Law Committee, under the leadership of State Senator James Maroney, introduced SB-1295 on February 13, 2025, which among other provisions, proposed

[4] Genetic Information Privacy Act, MONT. CODE ANN. § 30-23-102(9) (effective Oct. 1, 2025).
[5] *Id.*, at § 30-23-102(10)(a).
[6] *Id.*, at § 30-23-102(10)(b).
[7] Colorado Privacy Act, COLO. REV. STAT. § 6-1-1303(16.7) (effective Aug. 7, 2024).
[8] *Id.*, at § 6-1-1303(2.2).
[9] *Id.*, at § 6-1-1303(24).

amending the Connecticut Data Privacy Act to protect "neural data" as "sensitive data." The bill passed the Senate on June 3, 2025 on a vote of 33-2 and the House on June 4, 2025 on a vote of 127-15. Governor Ned Lamont signed the bill into law on June 24, 2025, and it will enter into force on July 1, 2026. The CTDPA defines "neural data" as "any information that is generated by measuring the activity of an individual's central nervous system."[10] Under the CTDPA, "sensitive data" now refers to "personal data that includes . . . neural data."[11] The Connecticut Data Privacy Act requires consumer consent for the processing of sensitive data. Therefore, the changes to the CTDPA provide heightened protections for Connecticut consumers' neural data. These changes to the CTDPA were introduced to update Connecticut law in line with the changes to the CCPA that protected neural data. Thus, although the Neurorights Foundation was not involved in drafting or advocating for the bill in Connecticut, these developments demonstrate how the Foundation's work in California is shaping data privacy protections across the country.

Recommended Approach

In June 2025, the House of Delegates of the American Medical Association[12] (AMA) adopted Resolution 503 by consensus. The Resolution defined "neurotechnologies" as "devices capable of recording, interpreting, or altering the response of an individual's central or peripheral nervous system to its internal or external environment."[13]

The Resolution adopted as a new AMA House of Delegates policy that "neural data" is "information obtained by measuring the activity of a person's central or peripheral nervous system through the use of neurotechnologies, but neural data does not include data inferred from nonneural information."[14] It further explained that neural data "is extremely sensitive, and can reveal intimate information about individuals, including information about health, mental states, emotions, and cognitive functioning."[15] And it adopted another new AMA House of Delegates policy, which says "[O]ur AMA support legislative and regulatory efforts to protect the privacy and security of individuals' neurological data as well as protection from discrimination and inequality that may be caused by the use of neurotechnologies."[16]

Finally, and also importantly, the AMA House of Delegates adopted a new policy stating "[O]ur AMA oppose any efforts to broaden the consensus medical definition of neural data to include data inferred from nonneural information gathered by biosensors (including biometric devices), as this is a distinct category of data with its own independent qualities and regulatory needs."[17]

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[10] Connecticut Data Privacy Act, Conn. Gen. Stat. § 42-515(24) (effective July 1, 2026).
[11] *Id.*, at § 42-515(39).
[12] The House of Delegates is the legislative and policy-making body of the American Medical Association. It comprises representatives of all state medical associations, national medical specialty societies, AMA sections, national medical societies, professional interest medical associations, and federal services including the U.S. Public Health Service.
[13] AMA House of Delegates, Resolution 503, *Safeguarding Neural Data Collected by Neurotechnologies*, June 11, 2025, adopted by consensus.
[14] *Id.*
[15] *Id.*
[16] *Id.*
[17] *Id.*

Neurorights Foundation

Grounded in the AMA definitions and the experience of the Neurorights Foundation's work with California, Montana, and Colorado, for states considering adopting new laws to protect neural data, it is recommended that:

For states with a consumer data privacy law, legislation should amend that law to:

- Define "neurotechnologies" and "neural data," using the AMA definitions as a model, as every state medical society supported these definitions; and
- Insert "neural data" as a category of "sensitive data," "sensitive personal information," or whatever term is used that provides the highest levels of protection equivalent to that of genetic and biometric data.

For states without a consumer data privacy law, legislation should:

- Identify the right place where the protection of "neural data" fits best (e.g., some states have stand-alone genetic data privacy laws);
- Define "neurotechnologies" and "neural data," using the AMA definitions as a model, as every state medical society supported these definitions;
- Protect "neural data" at highest level of protection equivalent to that of genetic and biometric data; and
- Ensure the new law provides individuals, to the maximum extent possible, the right to know how their data is being used, the right to delete the data at any time, and the right to opt out of sale or sharing of data.

In either scenario, the Neurorights Foundation recommends that new legislation focus exclusively on protecting neural data and not try, at the same time, to also protect "data inferred from nonneural information gathered by biosensors." That is because this broader approach was considered and rejected in all four states that have adopted new laws. While there is widespread and virtually unanimous support across the political spectrum to protect neural data, there is strong bipartisan opposition to protecting nonneural biosensor data both because it is much less sensitive and each category of such data has its own corporate interests aligned against such protections being imposed.

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