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S. 4682

To establish requirements for human judgment in the use of force by autonomous weapon systems used by the Department of Defense, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JUNE 4, 2026

Mr. KELLY introduced the following bill; which was read twice and referred to the Committee on Armed Services

A BILL

To establish requirements for human judgment in the use of force by autonomous weapon systems used by the Department of Defense, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Ultimate Human Re-
5 sponsibility in Defense Systems Act of 2026”.

6 **SEC. 2. DEFINITIONS.**

7 In this Act:

8 (1) AUTONOMOUS WEAPON SYSTEM.—The term
9 “autonomous weapon system” means a weapon sys-

1 tem that, once activated, can select and engage tar-
2 gets without further intervention by a human oper-
3 ator.

4 (2) CONGRESSIONAL DEFENSE COMMITTEES.—
5 The term “congressional defense committees” has
6 the meaning given that term in section 101(a) of
7 title 10, United States Code.

8 (3) ULTIMATE HUMAN RESPONSIBILITY.—The
9 term “ultimate human responsibility”, with respect
10 to a weapon system, means the ability of a human
11 commander or operator to exercise informed human
12 agency—

13 (A) to understand the operational context
14 of the weapon system through training, capacity
15 building, and integration of design and testing
16 features that strengthen human understanding
17 and effective oversight;

18 (B) to supervise, intervene in, or terminate
19 the use of force by the system, thereby guaran-
20 teeing human responsibility when appropriate
21 given system design; and

22 (C) to ensure compliance with all applica-
23 ble United States law and international law, in-
24 cluding applicable treaties, weapon system safe-

1 ty rules, the law of armed conflict, and rules of
2 engagement.

3 (4) USE OF FORCE.—The term “use of force”
4 means the application of kinetic lethal or non-lethal
5 military force against a target.

6 **SEC. 3. REQUIREMENT FOR HUMAN JUDGMENT IN AUTON-**
7 **OMOUS WEAPON SYSTEMS.**

8 (a) POLICY REQUIREMENT.—The Secretary of De-
9 fense shall—

10 (1) ensure that any autonomous weapon system
11 or artificial intelligence capability developed, ac-
12 quired, or operated by the Department of Defense—

13 (A) is designed and employed in a manner
14 that enables commanders and operators to exer-
15 cise ultimate human responsibility over the use
16 of force; and

17 (B) is developed, fielded and employed
18 using ethical and legal principles that would de-
19 lineate unlawful uses of artificial intelligence;
20 and

21 (2) develop technical and operational and orga-
22 nizational guidelines around the use of artificial in-
23 telligence.

24 (b) DESIGN REQUIREMENTS.—To meet the require-
25 ments under subsection (a), the Secretary of Defense shall

1 ensure that any autonomous weapon system or artificial
2 intelligence capability described in such subsection, to the
3 maximum extent practicable—

4 (1) allows human operators to supervise the op-
5 eration of the weapon system during mission execu-
6 tion when appropriate given system design;

7 (2) includes mechanisms that allow com-
8 manders or operators to intervene in or terminate
9 the use of force by the weapon system during mis-
10 sion execution when appropriate given system de-
11 sign;

12 (3) includes fail-safe mechanisms to enable
13 manual control when autonomous systems are de-
14 graded, jammed, spoofed, or under adversarial at-
15 tack when appropriate given system design;

16 (4) provides sufficient information regarding
17 weapon system status and decision logic to enable
18 operators to understand, oversee, and exercise func-
19 tional control over system behavior;

20 (5) maintains records of relevant target selec-
21 tion data, decision logic, and human operator actions
22 sufficient to enable post-engagement review of com-
23 pliance with the requirements under subsection (a);
24 and

(6) operates consistent with applicable United States law and international law, rules of engagement, the law of armed conflict, applicable treaties, and Department of Defense policy.

(c) OPERATIONAL OVERSIGHT.—

(1) IN GENERAL.—The Secretary of Defense shall establish procedures to ensure that commanders and operators are rigorously trained to appropriately supervise autonomous weapon systems or artificial intelligence capabilities in operational environments, including regular proficiency assessments in manual target identification, threat assessment, and engagement procedures, to ensure operators can effectively execute missions using other capabilities when autonomous systems are unavailable or unreliable.

(2) REPORTING MECHANISM.—The procedures established under paragraph (1) shall include a mechanism for operators of autonomous weapon systems or artificial intelligence capability to report, without fear of reprisal, concerns regarding weapon system reliability or the adequacy of human-machine interfaces.

SEC. 4. REVIEW AND CERTIFICATION.

(a) SENIOR-LEVEL REVIEW.—

1 (1) IN GENERAL.—Before fielding an autono-
2 mous weapon system capable of independently select-
3 ing and engaging targets without human super-
4 vision, the Director of Operational Test and Evalua-
5 tion shall conduct a review to certify that the weap-
6 on system complies with the requirements of this
7 Act.

8 (2) INDEPENDENT ASSESSMENT.—Each review
9 required under paragraph (1) with respect to an au-
10 tonomous weapon system shall include an inde-
11 pendent adversarial testing (“red-team”) assessment
12 that evaluates the vulnerability of the system to ad-
13 versarial manipulation under operationally realistic
14 conditions, including degraded and electronic war-
15 fare contested environments (such as jamming and
16 spoofing), communication disruption, and adversarial
17 manipulation.

18 (b) CERTIFICATION REQUIREMENT.—No autono-
19 mous weapon system described in subsection (a) may be
20 fielded by the Department of Defense unless the Director
21 of Operational Test and Evaluation certifies that the
22 weapon system—

23 (1) allows for ultimate human responsibility
24 with respect to the use of force; and

1 (2) has been tested to verify secure, safe, and
2 reliable operations that meet the reliability stand-
3 ards of the Department for weapon systems, includ-
4 ing retesting following any significant software up-
5 date or change in operational environment.

6 (c) TESTING STANDARDS.—

7 (1) IN GENERAL.—Not later than 18 months
8 after the date of the enactment of this Act, the Di-
9 rector of Operational Test and Evaluation shall pub-
10 lish on a publicly available website standards for the
11 testing and evaluation of artificial intelligence com-
12 ponents in autonomous weapon systems, including
13 benchmarks for reliability, robustness, security, and
14 human-machine team performance.

15 (2) FORM.—The standards required to be pub-
16 lished under paragraph (1) shall be published in un-
17 classified form to the maximum extent practicable.

18 **SEC. 5. ANNUAL REPORTING TO CONGRESS.**

19 Not later than one year after the date of the enact-
20 ment of this Act, and semiannually thereafter until the
21 date that is six years after the date of the enactment of
22 this Act, the Secretary of Defense shall submit to the con-
23 gressional defense committees a report that includes—

1 (1) a summary of autonomous weapon systems
2 in development or fielded by the Department of De-
3 fense;

4 (2) steps taken by the Secretary to ensure com-
5 pliance with the requirements of this Act; and

6 (3) such recommendations as the Secretary may
7 have for legislative or administrative action relating
8 to human judgment in autonomous weapon systems.

9 **SEC. 6. AUTONOMOUS WEAPON SYSTEM INCIDENT REPOSI-**
10 **TORY.**

11 (a) ESTABLISHMENT.—The Secretary of Defense
12 shall establish and maintain a centralized repository for
13 reporting, collecting, and analyzing incidents involving au-
14 tonomous weapon systems and artificial intelligence capa-
15 bilities used by the Department of Defense.

16 (b) PURPOSE.—The repository established under sub-
17 section (a) shall be used—

18 (1) to document operational incidents, weapon
19 system failures, unintended weapon system behav-
20 iors, or near-miss events involving autonomous
21 weapon systems and artificial incident capabilities;

22 (2) to enable the Department to identify sys-
23 temic risks, software errors, or operational
24 vulnerabilities associated with such weapon systems
25 and capabilities; and

1 (3) to promote institutional learning and im-
2 provement in the design, testing, and operational
3 employment of autonomous weapon systems and ar-
4 tificial intelligence capabilities.

5 (c) REPORTING REQUIREMENTS.—The Secretary
6 shall establish procedures requiring the reporting of inci-
7 dents described in subsection (b)(1), including—

8 (1) operational malfunctions affecting the use
9 of force;

10 (2) unintended or anomalous weapon system be-
11 havior;

12 (3) instances in which autonomous weapon sys-
13 tems or artificial intelligence capabilities selected or
14 engaged targets inconsistent with commander intent
15 or rules of engagement, regardless of whether en-
16 gagement was ultimately executed;

17 (4) human-machine interaction failures affect-
18 ing command or operator control; and

19 (5) other safety-related events determined ap-
20 propriate by the Secretary.

21 (d) SAFETY REPORTING MODEL.—In establishing
22 the repository under subsection (a), the Secretary shall,
23 to the extent practicable, model reporting practices on
24 aviation safety reporting systems used to identify and

1 mitigate systemic risks in complex operational environ-
2 ments.

3 (e) ANALYSIS AND DISSEMINATION.—The Secretary
4 shall ensure that information collected through the reposi-
5 tory established under subsection (a) is analyzed to iden-
6 tify trends and lessons learned, and that appropriate find-
7 ings are disseminated across the Department of Defense
8 to improve system design, training, and operational proce-
9 dures.

10 (f) PROTECTION OF SENSITIVE INFORMATION.—In-
11 formation contained in the repository established under
12 subsection (a) shall be handled in accordance with applica-
13 ble classification, operational security, and national secu-
14 rity requirements.

15 (g) CONGRESSIONAL BRIEFING.—Not less frequently
16 than semiannually, the Secretary shall provide to the con-
17 gressional defense committees a classified briefing on
18 trends, systemic risks, and corrective actions identified
19 through the repository established under subsection (a).

20 **SEC. 7. TRAINING PIPELINES.**

21 (a) IN GENERAL.—The Secretary of Defense shall
22 develop formal training pipelines for autonomous systems
23 of the Department of Defense.

24 (b) ELEMENTS.—The formal training pipelines devel-
25 oped under subsection (a) shall include the following:

1 (1) Specialized training tracks for operators,
2 commanders, and system supervisors.

3 (2) Certification in human-machine teaming,
4 not just system operation.

5 (3) Mandatory training in denied and contested
6 environments, such as loss of global positioning sys-
7 tem, electronic warfare, and degraded communica-
8 tions.

9 (4) Integration of autonomous systems into
10 Combat Training Center rotations.

11 (5) Continuous retraining tied to software up-
12 dates and system changes.

13 **SEC. 8. CIVILIAN HARM MITIGATION AND RESPONSE OF-**
14 **FICE.**

15 (a) ESTABLISHMENT.—The Secretary of Defense
16 shall establish within the Office of the Secretary of De-
17 fense an office to be known as the “Civilian Harm Mitiga-
18 tion and Response Office” (in this section referred to as
19 the “Office”).

20 (b) PURPOSE.—The purpose of the Office is to de-
21 velop, oversee, and coordinate Department-wide policies,
22 practices, and capabilities to prevent, mitigate, and re-
23 spond to civilian harm resulting from military operations.

24 (c) RESPONSIBILITIES.—The Office shall—

1 (1) develop and implement policies and guid-
2 ance relating to civilian harm mitigation and re-
3 sponse;

4 (2) oversee the integration of civilian harm
5 mitigation practices into planning, targeting, and
6 operational processes;

7 (3) coordinate assessments, investigations, and
8 responses to incidents involving civilian harm;

9 (4) support training and doctrine development
10 across the Department; and

11 (5) provide regular reports to Congress on civil-
12 ian harm mitigation efforts and outcomes.

13 (d) LEADERSHIP.—The Office shall be headed by a
14 senior official designated by the Secretary of Defense.

15 **SEC. 9. RULE OF CONSTRUCTION.**

16 Nothing in this Act shall be construed to prohibit the
17 development or use of autonomous weapon systems de-
18 signed to intercept incoming threats where human super-
19 vision remains part of the operational design.

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