

International Definitions of Artificial Intelligence

By IAPP Research and Insights

Computer scientist John McCarthy coined the term artificial intelligence in 1955, defining it as "the science and engineering of making intelligent machines." He organized the Dartmouth Summer Research Project on Artificial Intelligence a year later — an event that many consider the birthplace of the field.

In today's world, the [definition](#) of AI has been in continuous evolution, its contours and constraints changing to align with current and perhaps future technological progress and cultural contexts. In fact, most papers and articles are quick to point out the lack of common [consensus](#) around the definition of AI. As a [resource](#) from British research organization the Ada Lovelace Institute states, "We recognise that the terminology in this area is contested. This is a fast-moving topic, and we expect that terminology will evolve quickly." The difficulty in defining AI is illustrated by what AI historian Pamela McCorduck called the "odd paradox," referring to the idea that, as computer scientists find new and innovative solutions, computational techniques once considered AI lose the title as they become common and repetitive.

The indeterminate nature of the term poses particular challenges in the regulatory space. Indeed, in 2017 a New York City Council task force downgraded its [mission](#) to regulate the city's use of automated decision-making systems to just defining the types of systems subject to regulation because it could not agree on a workable, legal definition of AI.

With this understanding, the following chart provides a snapshot of some of the definitions of AI from various global and sectoral (government, civil society and industry) perspectives. The chart is not an exhaustive list. It allows for cross-contextual comparisons from key players in the AI ecosystem. We welcome feedback and input on any additional sources — please feel free to reach out to the contacts provided at the end of this resource.

LEGISLATION AND LEGAL INSTRUMENTS

Jurisdiction	Published source	Definition of AI or AI system*
Brazil	2023 · DRAFT Bill to Establish a Comprehensive Framework for Ethical and Responsible Use of AI Systems	A computer system, with different degrees of autonomy, designed to infer how to achieve a given set of objectives, using learning-based approaches from machine and/or logic and knowledge representation, through data from input from machines or humans, with the aim of producing predictions, recommendations or decisions that may influence the environment virtual or real. → This definition has been unofficially translated from Portuguese.
Canada	2023 · DRAFT Artificial Intelligence and Data Act	A technological system that, autonomously or partly autonomously, processes data related to human activities through the use of a genetic algorithm, a neural network, machine learning or another technique in order to generate content or make decisions, recommendations or predictions.
U.S.	2023 · DRAFT National Defense Authorization Act for Fiscal Year 2024	A machine-based system that can for a given set of human-defined objectives, make predictions, recommendations or decisions influencing real or virtual environments. Artificial intelligence systems use machine and human-based inputs to: <ol style="list-style-type: none"> a. Perceive real and virtual environments. b. Abstract such perceptions into models through analysis in an automated manner. c. Use model inference to formulate options for information or action. → This legislation adopts the definition published in National Artificial Intelligence Initiative Act of 2020 , which is currently in force.
E.U.	2022 · DRAFT Artificial Intelligence Act	A system that is designed to operate with elements of autonomy and that, based on machine and/or human-provided data and inputs, infers how to achieve a given set of human-defined objectives using machine learning and/or logic- and knowledge based approaches, and produces system-generated outputs such as content (generative AI systems), predictions, recommendations or decisions, influencing the environments with which the AI system interacts.

**All definitions in this document are direct quotations from the linked sources.*

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<p>E.U.</p>	<p>2021 • DRAFT</p> <p>European Commission, Proposal for a Regulation of the European Parliament and of the Council: Laying Down Harmonised Rules on AI and Amending Certain Union Legislative Acts</p>	<p>Software that is developed with one or more of the techniques and approaches listed in Annex I and can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environments they interact with.</p> <p>Annex I, AI techniques and approaches, includes:</p> <ol style="list-style-type: none"> a. Machine learning approaches, including supervised, unsupervised and reinforcement learning, using a wide variety of methods including deep learning. b. Logic- and knowledge-based approaches, including knowledge representation, inductive (logic) programming, knowledge bases, inference and deductive engines, (symbolic) reasoning and expert systems. c. Statistical approaches, Bayesian estimation, search and optimization methods. <p>→ This definition was worked into the current draft definition for the EU AI Act.</p>
<p>U.K.</p>	<p>2021 • IN FORCE</p> <p>National Security and Investment Act</p>	<p>Technology enabling the programming or training of a device or software to:</p> <ol style="list-style-type: none"> a. Perceive environments through the use of data. b. Interpret data using automated processing designed to approximate cognitive abilities. c. Make recommendations, predictions or decisions; with a view to achieving a specific objective.

LEGISLATION AND LEGAL INSTRUMENTS

Jurisdiction	Published source	Definition of AI or AI system*
<p>U.S.</p>	<p>2020 · DRAFT Fundamentally Understanding the Usability and Realistic Evolution of Artificial Intelligence Act</p>	<ul style="list-style-type: none"> a. Any artificial systems that perform tasks under varying and unpredictable circumstances, without significant human oversight, or that can learn from their experience and improve their performance. Such systems may be developed in computer software, physical hardware, or other contexts not yet contemplated. They may solve tasks requiring human-like perception, cognition, planning, learning, communication, or physical action. In general, the more human-like the system within the context of its tasks, the more it can be said to use artificial intelligence. b. Systems that think like humans, such as cognitive architectures and neural networks. c. Systems that act like humans, such as systems that can pass the Turing test or other comparable test via natural language processing, knowledge representation, automated reasoning, and learning. d. A set of techniques, including machine learning, that seek to approximate some cognitive task. e. Systems that act rationally, such as intelligent software agents and embodied robots that achieve goals via perception, planning, reasoning, learning, communicating, decision-making, and acting. <p>→ A version of this legislation was introduced in both the Senate and House but it never left the committee stage.</p> <p>→ This definition is very similar to the definition asserted in the enacted National Defense Authorization Act for Fiscal Year 2019. Two recently introduced pieces of legislation, S. 2293, the AI Leadership to Enable Accountable Deployment Act, and S. 1353, the Advancing American AI Act, point to this 2019 definition as well.</p>
<p>Organisation for Economic Co-operation and Development</p>	<p>2019 OECD Legal Instrument, Recommendation of the Council on Artificial Intelligence</p>	<p>A machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments. AI systems are designed to operate with varying levels of autonomy.</p>

GUIDANCE, STANDARDS AND VOLUNTARY FRAMEWORKS

Jurisdiction	Published source	Definition of AI or AI system*
<p>Council of Europe</p>	<p>2023 AI glossary</p>	<p>A set of sciences, theories and techniques whose purpose is to reproduce by a machine the cognitive abilities of a human being. Current developments aim to be able to entrust a machine with complex tasks previously delegated to a human.</p> <p>→ This definition is followed by a paragraph differentiating strong AI from weak AI.</p>
<p>United Arab Emirates</p>	<p>2023 AI Adoption Guidelines in Government Services</p>	<p>Systems or machines that mimic human intelligence to perform tasks and can iteratively improve themselves based on the data they collect.</p> <p>→ The UAE Ministry of Cabinet Affairs Prime Minister's Office provides an official translation of the report from Arabic. The term is unofficially defined in the report.</p>
<p>U.K.</p>	<p>2023 Information Commissioner's Office, UK GDPR guidance and resources: Definitions</p>	<p>An umbrella term for a range of algorithm-based technologies that solve complex tasks by carrying out functions that previously required human thinking. Decisions made using AI are either fully automated, or with a "human in the loop."</p>
<p>U.S.</p>	<p>2023 National Artificial Intelligence Research Resource Task Force, Strengthening and Democratizing the U.S. Artificial Intelligence Innovation Ecosystem: An Implementation Plan for a National Artificial Intelligence Research Resource</p>	<p>A machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments. (AI) systems use machine and human-based inputs to:</p> <ol style="list-style-type: none"> a. Perceive real and virtual environments. b. Abstract such perceptions into models through analysis in an automated manner. c. Use model inference to formulate options for information or action.
<p>World Intellectual Property Organization</p>	<p>2023 Frequently asked questions: AI and IP policy</p>	<p>There is no universal definition of artificial intelligence. AI is generally considered to be a discipline of computer science that is aimed at developing machines and systems that can carry out tasks considered to require human intelligence. Machine learning and deep learning are two subsets of AI. In recent years, with the development of new neural network techniques and hardware, AI is usually perceived as a synonym for "deep supervised machine learning."</p>

GUIDANCE, STANDARDS AND VOLUNTARY FRAMEWORKS

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Japan	2022 AI Governance Guidelines Working Group, Governance Guidelines for the Practice of AI Principles	<p>A system that is developed with a machine learning approach, including supervised, unsupervised and reinforcement learning, using a wide variety of methods including deep learning and that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments. AI systems are designed to operate with varying levels of autonomy. It includes not only software but also a machine which contains software as an element.</p> <p>→ The report also notes if a system that replaces human decision-making is used, the guidelines could still apply even if machine learning is not explicitly used to train the system.</p> <p>→ This is an official translation of the report from Japanese.</p>
U.S.	2022 White House Office of Science and Technology, Blueprint for an AI Bill of Rights	<p>Automated systems that have the potential to meaningfully impact the American public's rights, opportunities, or access to critical resources or services.</p> <p>An "automated system" is any system, software, or process that uses computation as whole or part of a system to determine outcomes, make or aid decisions, inform policy implementation, collect data or observations, or otherwise interact with individuals and/or communities. Automated systems include, but are not limited to, systems derived from machine learning, statistics, or other data processing or artificial intelligence techniques, and exclude passive computing infrastructure. ... Throughout this framework, automated systems that are considered in scope are only those that have the potential to meaningfully impact individuals' or communities' rights, opportunities, or access.</p> <p>→ This definition emphasizes technology systems that impact individuals' or communities' rights.</p>
China	2021 National Information Security Standardisation Technical Committee of China, Practice Guide on AI Ethical Security Risk Prevention	<p>The simulation, extension or expansion of human intelligence by means of perceiving the environment, acquiring knowledge, derivation and deduction using computers or the equipment controlled by them.</p> <p>→ The translation of this term from Chinese is copied from the British Standards Institute Ethical and Trustworthy AI report.</p>

GUIDANCE, STANDARDS AND VOLUNTARY FRAMEWORKS

Jurisdiction	Published source	Definition of AI or AI system*
<p>Colombia</p>	<p>2021 Ethical Framework for Artificial Intelligence in Colombia</p>	<p>A field of computer science dedicated to solving cognitive problems commonly associated with human intelligence or intelligent beings, understood as those that can adapt to changing situations. Its basis is the development of computer systems, the availability of data and algorithms.</p> <p>→ The report acknowledges there are many definitions of AI and provides the quoted definition as a summary. → There is an official translation of the report from Spanish.</p>
<p>India</p>	<p>2021 National Institution for Transforming India, Responsible AI #AIFORALL: Approach document for India</p>	<p>A constellation of technologies that enable machines to act with higher levels of intelligence and emulate the human capabilities of sense, comprehend and act. Computer vision and audio processing can actively perceive the world around them by acquiring and processing images, sound and speech. The natural language processing and inference engines can enable AI systems to analyse and understand the information collected. An AI system can also take decisions through inference engines or undertake actions in the physical world. These capabilities are augmented by the ability to learn from experience and keep adapting over time.</p>
<p>U.N.</p>	<p>2021 UNESCO, Recommendation on the Ethics of AI</p>	<p>Systems which have the capacity to process data and information in a way that resembles intelligent behavior, and typically includes aspects of reasoning, learning, perception, prediction, planning or control.</p> <p>AI systems are information-processing technologies that integrate models and algorithms that produce a capacity to learn and to perform cognitive tasks leading to outcomes such as prediction and decision-making in material and virtual environments. AI systems are designed to operate with varying degrees of autonomy by means of knowledge modelling and representation and by exploiting data and calculating correlations. AI systems may include several methods, such as but not limited to:</p> <ol style="list-style-type: none"> a. Machine learning, including deep learning and reinforcement learning. b. Machine reasoning, including planning, scheduling, knowledge representation and reasoning search, and optimization. <p>→ This definition is prefaced by the following note: "This Recommendation does not have the ambition to provide one single definition of AI, since such a definition would need to change over time, in accordance with technological developments. Rather, its ambition is to address those features of AI systems that are of central ethical relevance."</p>

GUIDANCE, STANDARDS AND VOLUNTARY FRAMEWORKS

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<p>U.K.</p>	<p>2021 National AI Strategy</p>	<p>Machines that perform tasks normally performed by human intelligence, especially when the machines learn from data how to do those tasks.</p> <p>→ The term is unofficially defined in the report.</p>
<p>Singapore</p>	<p>2020 Model AI Governance Framework Second Edition</p>	<p>A set of technologies that seek to simulate human traits such as knowledge, reasoning, problem solving, perception, learning and planning, and, depending on the AI model, produce an output or decision (such as a prediction, recommendation, and/or classification). AI technologies rely on AI algorithms to generate models. The most appropriate model(s) is/are selected and deployed in a production system.</p> <p>→ The framework includes a disclaimer that this is a nonauthoritative and nonexhaustive definition.</p>
<p>Spain</p>	<p>2020 Agencia Española de Protección de Datos, GDPR compliance or processings that embed Artificial Intelligence: An Introduction</p>	<p>The capacity of a machine to act in a way that a human mind would, including the aspect of creativity and capacity to perform complex analyses and inferences from complex and even incomplete information.</p> <p>→ The report prefaces this definition by saying there are many ways to define AI and this is one way to summarize some of those definitions.</p> <p>→ The Spanish Data Protection Agency provides an official translation of the report from Spanish.</p>

GUIDANCE, STANDARDS AND VOLUNTARY FRAMEWORKS

Jurisdiction	Published source	Definition of AI or AI system*
<p>U.S. Patent and Trademark Office</p>	<p>2020 Inventing AI: Tracing the diffusion of artificial intelligence with U.S. patents</p>	<p>One or more of eight component technologies (listed below). These components span software, hardware, and applications, and a single patent document may contain multiple AI component technologies.</p> <ul style="list-style-type: none"> • Planning/control • Knowledge processing • Speech • AI hardware • Evolutionary computation • Natural language processing • Machine learning • Vision
<p>Australia</p>	<p>2019 Artificial Intelligence Roadmap</p>	<p>A collection of interrelated technologies used to solve problems autonomously and perform tasks to achieve defined objectives, in some cases without explicit guidance from a human being. Subfields of AI includes machine learning, computer vision, human language technologies, robotics, knowledge representation and other scientific fields. The power of AI comes from a convergence of technologies.</p> <p>→ The term is unofficially defined in the executive summary.</p>

GUIDANCE, STANDARDS AND VOLUNTARY FRAMEWORKS

Jurisdiction	Published source	Definition of AI or AI system*
<p>European Commission</p>	<p>2019</p> <p>The High-Level Expert Group on AI, A Definition of AI: Main Capabilities and Disciplines</p>	<p>Software (and possibly also hardware) systems designed by humans that, given a complex goal, act in the physical or digital dimension by perceiving their environment through data acquisition, interpreting the collected structured or unstructured data, reasoning on the knowledge, or processing the information, derived from this data and deciding the best action(s) to take to achieve the given goal. AI systems can either use symbolic rules or learn a numeric model, and they can also adapt their behaviour by analysing how the environment is affected by their previous actions.</p> <p>As a scientific discipline, AI includes several approaches and techniques, such as machine learning (of which deep learning and reinforcement learning are specific examples), machine reasoning (which includes planning, scheduling, knowledge representation and reasoning, search, and optimization), and robotics (which includes control, perception, sensors and actuators, as well as the integration of all other techniques into cyber-physical systems).</p> <p>→ This definition is also featured by the EU Agency for Fundamental Rights in their 2020 report Getting the Future Right: AI and Fundamental Rights.</p>
<p>Japan</p>	<p>2019</p> <p>Conference Toward AI Network Society, AI Utilization Guidelines</p>	<p>"AI" refers to a concept that collectively refers to AI software and AI systems.</p> <p>"AI software" refers to software that has the function to change its own implementation or output in the process of utilization, by learning from data, information, and knowledge; or by other methods. For example, machine learning software is classified into this category.</p> <p>"AI system" refers to systems that incorporate AI software as a component. For example, robots and cloud systems that implement AI software are classified under this category.</p> <p>→ There is a note that this definition applies mainly to narrow AI but the definition of the term "needs to be continuously discussed based on the trends of technological progress of AI."</p> <p>→ The Ministry of Internal Affairs and Communications provides a tentative translation of the report from Japanese.</p>

GUIDANCE, STANDARDS AND VOLUNTARY FRAMEWORKS

Jurisdiction	Published source	Definition of AI or AI system*
<p>OECD</p>	<p>2019 OECD Digital Economy, Scoping the OECD AI principles: Deliberations of the expert group on artificial intelligence at the OECD</p>	<p>A machine-based system that is capable of influencing the environment by making recommendations, predictions or decisions for a given set of objectives. It does so by utilising machine and/or human-based inputs/data to:</p> <ul style="list-style-type: none"> a. Perceive real and/or virtual environments. b. Abstract such perceptions into models manually or automatically. c. Use model interpretations to formulate options for outcomes.
<p>South Korea</p>	<p>2019 National Strategy for Artificial Intelligence</p>	<p>A science and technology that performs human intellectual functions with machines.</p> <p>→ The term is unofficially defined in the Understanding AI reference section.</p>
<p>Europe</p>	<p>2018 European Commission for the Efficiency of Justice, European Ethical Charter on the use of Artificial Intelligence in Judicial Systems and their Environment</p>	<p>A set of scientific methods, theories and techniques whose aim is to reproduce, by a machine, the cognitive abilities of human beings. Current developments seek to have machines perform complex tasks previously carried out by humans.</p> <p>However, the term (AI) is criticised by experts who distinguish between "strong" AIs (yet able to contextualise specialised and varied problems in a completely autonomous manner) and "weak" or "moderate" AIs (high performance in their field of training). Some experts argue that "strong" AIs would require significant advances in basic research, and not just simple improvements in the performance of existing systems, to be able to model the world as a whole.</p> <p>The tools identified in this document are developed using machine learning methods, i. e. "weak" AIs.</p>

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<p>Germany</p>	<p>2018 German Federal Government, National AI Strategy</p>	<p>There is no definition of AI which (is) generally valid or used consistently by all stakeholders. The Federal Government's AI Strategy is based on the following understanding of AI:</p> <p>In highly abstract terms, AI researchers can be assigned to two groups: "strong" and "weak" AI. "Strong" AI means that AI systems have the same intellectual capabilities as humans, or even exceed them. "Weak" AI is focused on the solution of specific problems using methods from mathematics and computer science, whereby the systems developed are capable of self-optimization. To this end, aspects of human intelligence are mapped and formally described, and systems are designed to simulate and support human thinking.</p> <p>→ The following paragraph qualifies that the National AI Strategy is focused on "weak" AI, which is used to solve specific problems. This includes deduction systems, knowledge-based systems, e.g. software that simulates expert knowledge, pattern analysis and recognition, robotics, and multimodal human-machine interaction, e.g. visual and language processing.</p>
<p>Norway</p>	<p>2018 Datatilsynet, Artificial Intelligence and Privacy</p>	<p>The concept used to describe computer systems that are able to learn from their own experiences and solve complex problems in different situations — abilities we previously thought were unique to mankind. And it is data, in many cases personal data, that fuels these systems, enabling them to learn and become intelligent.</p>
<p>U.S.</p>	<p>2018 Summary of the 2018 Department of Defense AI Strategy: Harnessing AI to Advance Our Security and Prosperity</p>	<p>The ability of machines to perform tasks that normally require human intelligence — for example, recognizing patterns, learning from experience, drawing conclusions, making predictions, or taking action — whether digitally or as the smart software behind autonomous physical systems.</p> <p>→ The term is unofficially defined in the introduction.</p>
<p>International Organization for Standardization International Electrotechnical Commission</p>	<p>2015 ISO/IEC 2382:2015(en), Information technology: Vocabulary</p>	<p>An interdisciplinary field, usually regarded as a branch of computer science, dealing with models and systems for the performance of functions generally associated with human intelligence, such as reasoning and learning.</p>

CIVIL SOCIETY AND ACADEMIA

Organization	Published source	Definition of AI or AI system*
<p>Ada Lovelace Institute</p>	<p>2023 Explainer: What is a foundation model?</p>	<p>The use of digital technology to create systems capable of performing tasks commonly thought to require intelligence. AI is constantly evolving, which means its properties and uses change. Two stable characteristics are that it:</p> <ul style="list-style-type: none"> a. Involves machines that use statistical methods to find patterns in large amounts of data. b. Enables a machine to perform repetitive tasks with data without the need for constant human guidance. <p>→ The article notes this definition is from the UK Government Data Ethics Framework and provides the disclaimer that this definition is a "snapshot in time," as terminology is socially constructed and influenced by the context surrounding the term.</p>
<p>American Civil Liberties Union</p>	<p>2023 Accountability in Artificial Intelligence</p>	<p>Computer models, or algorithms, that are widely used for automated decision making — analyzing massive amounts of data, finding correlations and then making predictions about future outcomes.</p> <p>→ The term is unofficially defined on the ACLU Racial Justice Program's AI homepage.</p>
<p>The Human Technology Institute at the University of Technology Sydney</p>	<p>2023 A Report on the State of AI Governance in Australia</p>	<p>A collective term for machine-based or digital systems that use machine or human-provided inputs to perform advanced tasks for a human-defined objective, such as producing predictions, advice, inferences, decisions, or generating content.</p> <p>Some AI systems operate autonomously and can use machine learning to improve and learn from new data continuously. Other AI systems are designed to be subject to a "human in the loop" who can approve or override the system's outputs. AI systems can be custom developed for a specific organizational purpose. Many are embedded in products or deployed by suppliers in upstream or outsourced services.</p>

CIVIL SOCIETY AND ACADEMIA

Organization	Published source	Definition of AI or AI system*
<p>International Telecommunications Industry</p>	<p>2023 Artificial Intelligence for good</p>	<p>A rich set of methods and disciplines, including vision, perception, speech and dialogue, decisions and planning, problem solving, robotics and other applications that enable self-learning. AI is best viewed as a set of technologies and techniques used to complement traditional human attributes, such as intelligence, analytical ability and other capabilities.</p> <p>→ The webpage also notes "there are various approaches to defining AI:</p> <ul style="list-style-type: none"> a. In terms of technologies, techniques and/or approaches (e.g., a neural network approach to machine translation). b. In terms of purpose (facial recognition, image recognition). c. In terms of functions (e.g., the ability to understand language, recognize pictures, solve problems, and learn, according to the Cambridge Dictionary). d. In terms of agents or machines or algorithms (e.g., robots, self-driving cars)."
<p>Alan Turing Institute</p>	<p>2022 Artificial intelligence in government: Concepts, standards, and a unified framework</p>	<p>A data-driven, machine-based system that can complete — with some degree of autonomy and learning ability — a specific cognitive task (or set of tasks), using [machine learning], agent computing, or related techniques.</p> <p>→ This paper has a full discussion about the considerations for defining AI for regulatory and government use.</p>
<p>Institute of Electrical and Electronics Engineers (United States)</p>	<p>2022 Leon Reznik, Intelligent Security Systems: How Artificial Intelligence, Machine Learning and Data Science Work for and Against Computer Security</p>	<p>Interdisciplinary field, usually regarded as a branch of computer science, dealing with models and systems for the performance of functions generally associated with human intelligence, such as reasoning and learning.</p> <p>→ This definition is also featured in the National Institute of Standards and Technology's The Language of Trustworthy AI: An In-Depth Glossary of Terms.</p>
<p>Stanford University Human-Centered Artificial Intelligence</p>	<p>2022 Artificial Intelligence Definitions</p>	<p>A term coined in 1955 by John McCarthy, Stanford's first faculty member in AI, who defined it as "the science and engineering of making intelligent machines." Much research has human program software agents with the knowledge to behave in a particular way, like playing chess, but today, we emphasize agents that can learn, just as human beings navigating our changing world.</p>

CIVIL SOCIETY AND ACADEMIA

Organization	Published source	Definition of AI or AI system*
World Health Organization	2021 Ethics & Governance of Artificial Intelligence for Health	A machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments. AI systems are designed to operate with varying levels of autonomy.
Brookings Institute	2020 The Brookings glossary of AI and emerging technologies	Indian engineers Shukla Shubhendu and Jaiswal Vijay define AI as "machines that respond to stimulation consistent with traditional responses from humans, given the human capacity for contemplation, judgment, and intention." This definition emphasizes several qualities that separate AI from mechanical devices or traditional computer software—specifically intentionality, intelligence, and adaptability. AI-based computer systems can learn from data, text, or images and make intentional and intelligent decisions based on that analysis.
Future of Privacy Forum	2018 The Privacy Expert's Guide to Artificial Intelligence and Machine Learning	The capability of computer processing systems to perform functions otherwise defined as those requiring human intelligence to accomplish.
University of Pretoria	2018 Artificial intelligence for Africa: An opportunity for growth, development, and democratisation	A constellation of technologies that enable machines to act with higher levels of intelligence and emulate human capabilities to sense, comprehend, and act. These human capabilities are augmented by the ability to learn from experience and adapt over time.
The International Journal of Scientific Engineering and Research	2013 Shukla Shubhendu and Jaiswal Vijay, Applicability of artificial intelligence in different fields of life	The study of ideas to bring into being machines that respond to stimulation consistent with traditional responses from humans, given the human capacity for contemplation, judgment and intention. Each such machine should engage in critical appraisal and selection of differing opinions within itself. Produced by human skill and labor, these machines should conduct themselves in agreement with life, spirit and sensitivity, though in reality, they are imitations. → This definition is also featured in NIST's The Language of Trustworthy AI: An In-Depth Glossary of Terms .

INDUSTRY

Company	Published source	Definition of AI or AI system*
Amazon Web Services	What is artificial intelligence?	The field of computer science dedicated to solving cognitive problems commonly associated with human intelligence, such as learning, problem solving, and pattern recognition.
Cisco	Artificial intelligence and machine learning topic page	<p>A field of study that gives computers human-like intelligence when performing a task. When applied to complex IT operations, AI assists with making better, faster decisions and enabling process automation.</p> <p>→ Page also states: "It's not uncommon for some to confuse (AI) with machine learning which is one of the most important categories of AI. (ML) can be described as the ability to continuously 'statistically learn' from data without explicit programming."</p>
Google	Machine learning glossary	<p>A non-human program or model that can solve sophisticated tasks. For example, a program or model that translates text or a program or model that identifies diseases from radiologic images both exhibit artificial intelligence.</p> <p>Formally, machine learning is a sub-field of artificial intelligence. However, in recent years, some organizations have begun using the terms artificial intelligence and machine learning interchangeably.</p>
IBM	Artificial intelligence topic page	<p>A field, which combines computer science and robust datasets, to enable problem-solving. It also encompasses sub-fields of machine learning and deep learning, which are frequently mentioned in conjunction with artificial intelligence. These disciplines are comprised of AI algorithms which seek to create expert systems which make predictions or classifications based on input data.</p> <p>→ Term is unofficially defined in the answer to: "What is artificial intelligence?"</p>
Microsoft	AI explained topic page	The ability of a computer system to deal with ambiguity, by making predictions using previously gathered data, and learning from errors in those predictions in order to generate newer, more accurate predictions about how to behave in the future.
Samsung	AI overview page	A branch of computer science that studies how to apply intelligent human-like behavior to mechanical systems. In other words, artificial intelligence makes mechanical systems like computers and robots think like humans do. When artificial intelligence is given a task, it selects an appropriate answer by collecting and analyzing information from its surrounding environment, and if it makes a mistake, it learns alternatives so it can do better next time.

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