STATE OF IDAHO
OFFICE OF ADMINISTRATIVE HEARINGS

Guidelines for Administrative Law Judges Regarding the Use of Artificial Intelligence

September 24, 2025

Introduction

These Guidelines are intended to provide general, non-technical advice about the use of artificial intelligence (AI) and generative artificial intelligence (GenAI) by Administrative Law Judges (ALJs) at the State of Idaho Office of Administrative Hearings (OAH). These guidelines also apply to OAH's independent contract hearing officers (ICHOs), as well as anyone in roles supporting OAH's ALJs and ICHOs, including deputy clerks and legal assistants.

These Guidelines identify key risks and issues associated with using AI/GenAI, as well as prohibitions and risk-avoidance for certain use-case scenarios. Any use of AI/GenAI by ALJs, ICHOs, and support staff must be consistent with OAH's overarching obligation to serve the citizens, businesses, and state agencies of Idaho by providing independent, efficient, and unbiased hearings of contested administrative cases.

These Guidelines are not intended to be exhaustive and any use of AI/GenAI must comply with the Idaho Code of Conduct for Administrative Law Judges and the canons contained therein.

These Guidelines are not intended to be final; the speed with which new AI/GenAI tools are developing militates in favor of ongoing updates and revisions to these Guidelines. ALJs should always utilize the most current Guidelines, and during interim periods between updates/revisions, should confer with the Chief ALJ regarding any new issues or concerns not addressed by the extant Guidelines.

These Guidelines are published online to promote transparency, open justice, and public confidence and to affirm that all ALJs and ICHOs are to promote decisional independence and unbiased decision-making.

Terminology and Background

This guidance finds that defining key terminology is important, and therefore, this guidance will adopt the "Glossary of Artificial Intelligence Terms for NJ Judges", [i] which is attached hereto. These terms will be used in this guidance and future revisions.

ALJs should also be familiar with existing AI/GenAI technologies, not only to understand their uses and limitations, but to ensure that ALJs have the ability to identify and address the use and misuse of AI/GenAI in contested administrative proceedings. This includes understanding the governing ethical considerations for lawyers regarding the use of AI/GenAI (as outlined in ABA Opinion No. 512[ii]), as well as limitations inherent to AI/GenAI,[iii] such as the potential for bias.[iv]

Guidelines

1. <u>ALJs are not permitted to use AI/GenAI to write orders or decisions.</u>

As an initial matter, per the State of Idaho Office of Information Technology Services (ITS) guidelines,[v] the use of AI/GenAI in rendering decisions without human supervision is a prohibited use-case:

> 4. Prohibited Use Cases: AI/GenAI tools must not be used for:
>
> > i. Fully autonomous decision-making affecting individual rights, benefits, or services.
>
> …

(highlights added).

In the context of orders and decisions issued by ALJs at OAH, AI/GenAI must <u>not</u> be used <u>at any stage of drafting</u> orders and/or decisions, including the drafting of outlines or similar pre-final documents. AI/GenAI tools are fundamentally limited in the following ways:

- Information generated by AI/GenAI systems, irrespective of the model used, can be inaccurate, incomplete, misleading, or out-of-date, especially with respect to legal information.
- Information generated by AI/GenAI systems may represent that the information generated is accurate both as to local law and current decisional authority.
- Information generated by AI/GenAI systems may include "hallucinated" case citations, case quotes, case summaries, statutory citations and language, and regulatory citations and language, which do not exist or which are inaccurately/incompletely represented.
- Information generated by AI/GenAI systems may make factual errors.

Even in cases where initial drafting/output is done with AI/GenAI and subject to human oversight, errors can occur. As orders and decisions made by ALJs fundamentally address individual property rights, benefits, and/or services, any error evading human review may significantly impact the determination of a proceeding before an ALJ.

Additionally, the use of AI/GenAI in drafting may also potentially impact public records exemptions related to ALJ decision-making under Idaho Code §74-102(1)(c), as inputs may be publicly available.[vi]

Governing Canon(s): 1.2 (Promoting Confidence in the Administrative Law Process), 2.2 (Impartiality and Fairness), 2.5 (Competence, Diligence, and Cooperation)

2. <u>ALJs are not permitted to use AI/GenAI for legal research in case proceedings</u>.

Whether public-use AI/GenAI or industry-specific companies providing legal research

services (which ALJs may use in researching caselaw, statutes, regulations, and other materials), the use of AI/GenAI in conducting legal research is not permitted, for the same reason as AI/GenAI is not to be used in the preparation of orders and decisions.

The potential for errors,[vii] whether in the form of hallucinated case citations, mis-quotes, or inaccurate/incomplete summaries, creates the same unacceptable risk for adversely impacting the determination of individual rights, benefits, or services. As a standard maxim of the legal profession, ALJs should never cite a case/statute/regulation/secondary source unless they have fully read it and accurately confirmed its currency.

Additionally, the use of AI/GenAI for legal authority summation may not provide an accurate, up-to-date summary of such authority, either by way of overlooking factual or legal nuance, or via ignoring other authority which may limit or otherwise impact the summarized legal authority. This includes the potential for AI/GenAI not recognizing nuances between different jurisdictions, and may fail to include relevant authority in its summation.

Governing Canon(s): 1.2, 2.2, 2.5

3. **ALJs are not permitted to use AI/GenAI for analysis of evidence or party submissions in case proceedings.**

A number of AI/GenAI products offer the ability to provide summaries of documents. ALJs shall not use these to generate summaries of any party submissions in contested cases, both as a function of ensuring case determination accuracy as well as protecting private information.

First, as with drafting and research, the use of AI/GenAI summation runs the risk of inaccurate or incomplete results, and may mischaracterize or otherwise disregard the context/relevancy of certain of parties' submissions (including evidence). This also potentially interferes with the ALJs charge to weigh the weight and credibility of evidence. Because of this risk, and because of an ALJs' obligation to act competently and independently, each and every party submission must be reviewed by the ALJ independent of any computerized summary of those submissions.

Second, the use of such AI/GenAI products risks significant privacy concerns. Once uploaded to a AI/GenAI system, the data – including PII ("Personally Identifiable Information") – may, with some likelihood, be retained by the system for additional training of that system.[viii] Importantly, this prohibition on use aligns with the State of Idaho's "Prohibited Use Case" 4.v, which prohibits the use of AI/GenAI for "[u]nauthorized disclosure of sensitive information, including personally identifiable information, protected health information, financial account information, law enforcement or security information, or information exempt from public disclosure."

Governing Canon(s): 1.2, 2.2, 2.5

4. **ALJs may use AI-generated voice-to-text transcripts.**

As permitted by existing IDAPA rule (IDAPA 62.01.01.601.04[ix]), "In preparing any order, a presiding officer may rely upon any unofficial transcript of a hearing, including, but not limited to, any transcript automatically generated by computer software," to also include real-time/closed caption transcriptions created during a proceeding or hearing. For audio recordings generated by a system lacking automatic transcription services, transcription may be made by State of Idaho-licensed software with a privacy feature ensuring that neither the audio nor transcript will be retained by the system. ALJs are not permitted to use unlicensed and/or public AI/GenAI systems to generate transcripts.

In utilizing an unofficial, computer-generated transcript, two additional points regarding usage are made:

- Such transcript is not an official transcript; therefor, ALJs are not to cite to the informal transcript, but instead must cite to the hour/minute marker within the video or audio recording itself. All citations must be verified for accuracy by the ALJ by viewing/listing to the recording.
- Computer-generated transcript programs, as well as traditional court reporting services, may offer AI-generated hearing summaries. As with other summaries (as discussed above), ALJs are not to use such summaries due to the risk of error and/or incompleteness.

Governing Canon(s): 1.2, 2.2, 2.5

5. **ALJs may control the use of AI/GenAI by parties in submissions and presentations in contested case proceedings.**

These guidelines are not intended to stifle innovation or impair access by self-represented litigants in administrative proceedings. ALJs should recognize that the use of AI/GenAI by attorneys and self-represented litigants is increasing and may be utilized by those parties for any number of reasons, including to understand the proceedings and governing law, and/or to assist in the presentation of their case to the ALJ.

However, ALJs retain the ability to control the use of AI/GenAI in contested case proceedings when submissions made by a party are generated, in whole or in part, by AI/GenAI. This is critical to ensure that all case presentations are factually and legally accurate, and to avoid the expenditure of time and other resources in unnecessary disputes regarding AI/GenAI use and misuse.

Accordingly, ALJs are permitted to request disclosure statements from parties (whether represented or self-represented) regarding the use of AI/GenAI in the preparation of briefing and other written submissions, including evidence. The decision whether to request such disclosure statements, and for which submissions, is solely within the discretion of the ALJ, and be made at any time during the course of a contested case, including at the outset before any party submissions.

The recommended disclosure language to require of parties is as follows:

I certify that no portion of this filing has been drafted by generative artificial intelligence, or otherwise that any language drafted by generative artificial intelligence contained herein—including quotations, citations, paraphrased assertions, and legal analysis—has been checked for accuracy, using print reporters or traditional legal databases, by a human being before it has been submitted to the Hearing Officer. I understand that by signing this filing, I am responsible for the contents herein, regardless of whether generative artificial intelligence drafted any portion of this filing.

Alternatively, the recommended language to include in relevant orders in advance of party submissions – in lieu of or in conjunction with any party disclosure language - is as follows:

Use of Generative Artificial Intelligence: No portion of any filing in this matter will be drafted by generative artificial intelligence—including quotations, citations, paraphrased assertions, and legal analysis—unless it has been checked for accuracy, using print reporters or traditional legal databases, by a human being before it is submitted to the Hearing Officer. Any party who signs any filing in this case will be held responsible for the contents thereof, regardless of whether generative artificial intelligence drafted any portion of that filing.

In conjunction with this, ALJs must be cautious in their determination of AI/GenAI usage. As a function of competency, ALJs are expected to stay informed of potential use-cases for AI/GenAI in legal proceedings (e.g., the use of avatars as presenting representatives and/or witnesses) to assist in their identification of, and evaluation of, such usage.

Additionally, for the same reasons outlined above in Guideline 3, ALJs are not to use AI/GenAI or other artificial intelligence system to identify the use of AI/GenAI in a party's submissions. As with direct usage, such usage implicates the risk of errors, as well as the disclosure of private information.

Governing Canon(s): 1.2, 2.2, 2.5

6. **Other AI/GenAI usage related to contested case proceedings.**

ALJs, and OAH as an agency, will not utilize AI/GenAI in agency functions that implicate individual administrative case proceedings. Potential prohibited usage may include, but is not limited to:

- Chatbots and/or AI-automated phone operators;
- Scheduling and calendaring of contested cases;
- Translation of testimony, party submissions, and evidence.

Governing Canon(s): 1.2, 2.2, 2.5

7. **<u>Other AI/GenAI usage not related to specific contested case proceedings.</u>**

Regarding the use of AI/GenAI usage outside of the context of a particular contested case proceeding, an ALJ is permitted to engage in such use provided that such usage does not 1) violate any provision of the Idaho Code of Conduct for Administrative Law Judges, and/or 2) violate any provision of the State of Idaho ITS "Artificial Intelligence (AI) – Governance Policy, Standard, and Guideline" and/or such other policies/procedures/regulations that ITS may provide regarding the use of AI/GenAI. Potential permitted usage may include, but is not limited to:

- Testing and evaluation of existing AI/GenAI applications and systems to assess such systems for their use in administrative proceedings or in general legal practice;
- Assistance in preparation for presentations (e.g., CLEs or other trainings);
- Agency website creation and/or maintenance;
- The preparation of standard forms and/or informational materials intended for usage by the general public, provided that all such output is reviewed and approved by an OAH employee with authority to conduct such review and approval;
- Analysis of case data for workflow, caseload, and other data assessment purposes, provided that such data is anonymized such that no PII data (including name) regarding individual cases is included in the dataset to be analyzed;
- Preparation of non-case correspondence (e.g., recommendation letters).

Questions regarding any non-case use, as well as any other use-case scenario within OAH not otherwise addressed by these Guidelines, should be addressed to the Chief Administrative Law Judge for review and approval.

Governing Canon(s): 1.2, 2.5

[i] "Glossary of AI Terms for NJ Judges," *available at* https://www.njcourts.gov/sites/default/files/attorneys/attorney-resources/aiglossary.pdf.

[ii] ABA Formal Opinion 512 (July 29, 2024), "Generative Artificial Intelligence Tools", *available at* https://www.americanbar.org/content/dam/aba/administrative/professional_responsibility/ethics-opinions/aba-formal-opinion-512.pdf.

[iii] "An Introduction to Artificial Intelligence for Federal Judges," Federal Judicial Center (2023), *available at* https://www.fjc.gov/sites/default/files/materials/47/An_Introduction_to_Artificial_Intelligence_for_Federal_Judges.pdf.

[iv] "Artificial Intelligence and the Courts: Materials for Judges – Artificial Intelligence and Bias – An Evaluation," American Association for the Advancement of Science (September 2022), *available at* https://www.aaas.org/sites/default/files/2022-09/Paper%204_AI%20and%20Bias_NIST_FINAL.pdf.

[v] "Artificial Intelligence (AI) – Governance Policy, Standard, and Guideline", State of Idaho Office of Information Technology Services (August 2025), *available at* https://its.idaho.gov/wp-content/uploads/2024/09/AI-PSG_FINAL-Aug2025.pdf

[vi] *See, e.g.,* "Hundreds of thousands of Grok chats exposed in Google results", BBC, *available at* https://www.bbc.com/news/articles/cdrkmk00jy0o (also discussing recent privacy issues re: ChatGPT & Meta)

[vii] "Hallucination-Free? Assessing the Reliability of Leading AI Legal Research Tools," Varun Magesh, Faiz Surani, Matthew Dahl, Mirac Suzgun, Christopher D. Manning, Daniel E. Ho, JOURNAL OF EMPIRICAL LEGAL STUDIES, Volume 22, Issue 2, June 2025, Pages 216-242 https://dho.stanford.edu/wp-content/uploads/Legal_RAG_Hallucinations.pdf

[viii] *See, e.g.,* "A major AI training data set contains millions of examples of personal data," Elaine Guo, MIT Technology Review, July 18, 2025 *available at* https://www.technologyreview.com/2025/07/18/1120466/a-major-ai-training-data-set-contains-millions-of-examples-of-personal-data/ *and* "Generative AI – Privacy & Intellectual Property", Naval Postgraduate School, *available at* https://libguides.nps.edu/gen-ai/privacy-intellectual.

[ix] https://adminrules.idaho.gov/rules/current/62/620101.pdf

Glossary of Artificial Intelligence Terms for NJ Judges

AI Agent	AI Model (or set of AI models) in production that operates to generate "independent" recommendations or decisions.
AI Lifecycle	The full process and steps by which an AI model or system is commissioned, designed, developed, trained, implemented, monitored, and decommissioned.
AI Model	An AI model is the product of applying an algorithm (or set of algorithms) to data in order to optimize on a particular goal and/or produce insights about a particular question or objective.
AI System	The ecosystem that includes AI models (themselves composed of algorithms and data), along with the humans, their organizations and any other technologies associated with their AI Lifecycle.
Algorithm	A step-by-step procedure for solving a problem or accomplishing some end. A familiar example is a recipe, which details the steps needed to prepare a dish. In a computer, an algorithm is implemented in computer code and details the discrete steps and calculations a computer needs to implement to complete a task. An algorithm is the "engine" an AI uses to "think" and make predictions.
Algorithmic Bias	The tendency of an AI model to produce outputs that perform differentially because of how an algorithm is built or functions with the data on which it is trained or operated.
Algorithmic Decision Making/ Automated Decision Making	No widely agreed upon definition. Generally, refers to an AI model permitted or instructed to determine outcomes, but can also less specifically refer to an AI system or model that facilitates, recommends, or influences human decisions or outcomes. The distinction between recommending and decision-making is almost always context dependent.
Artificial General Intelligence	AI capable of autonomous existence across a full range of capabilities, with

	the ability to establish its own objectives, adjust to circumstances, learn and follow through on complex instructions.
Artificial Intelligence	No widely agreed upon definition. AI involves machines designed to perform tasks that typically require human intelligence, including learning, reasoning, problem-solving, perception, and language understanding.
Artificial Narrow Intelligence	Narrow AI refers to models aimed at performing discrete tasks and functions.
Artificial Neural Network (ANN)	The model (or "tool") used in deep-learning AI best defined as a computer system that works to achieve intelligence through a network structure that works to simulate the human brain. An ANN analyzes data by passing it through multiple layers of artificial neurons which sift through and decipher the data. This layered network structure allows the system to analyze discrete data elements, draw connections between discovered data patterns, and ultimately derive meaning and form predictions. Neural networks can be wide, meaning each layer has large numbers of neurons, or deep, meaning data must pass through many layers of neurons before a final conclusion is drawn. Engineers determine the width and depth of the network based on their interpretation of the tools and structures a specific AI application needs for success.
Artificial Super Intelligence	AI models that are fully autonomous and self-executing in ways that surpass human intelligence and behavioral ability.
Augmented Reality	The overlaying and/or integration of computer generated visual, auditory, haptic, or somatosensory information and phenomena onto real world objects and interactions.
Augmented Human/ Machine Performance	AI models that assist or supplement humans or existing technologies in executing a task, potentially by reducing the time and energy necessary to complete it.

Authenticity	That which is genuinely who or what it is represented to be.
Autonomous Systems	AI-controlled machines and vehicles such as driverless cars and aerial drones that can operate and make decisions with little or no human control. Such systems already exist; however, in most cases stringent safety demands have forestalled widespread use. Lethal autonomous weapons systems (LAWS or simply AWS), or autonomous systems that can use deadly force, have received outsize legal, ethical, and political attention given widespread concerns about giving inhuman systems the power to take a human life.
Bias	Preference or tendency for one thing over another, whether for reasons of rational choice or intentional or unintentional discrimination.
Big Data	The enormous, and exponentially growing, amount of complex data (structured, unstructured, and semi-structured) that is driving AI models today.
Biometrics	Data points captured and measured from human bodily functions and characteristics, including heart rate, retinal patterns, facial geometry, gait, speech etc.
Black Box	A term used to describe the often-mysterious nature of AI decision-making and the problem of AI explainability. Machine learning models, particularly deep learning, can develop complex patterns that are hard for humans to interpret directly, even though the initial algorithms and structures are designed by humans. The challenge lies in interpreting how these algorithms process and learn from data. Considerable research is underway by organizations such as NIST to enable more transparent neural networks, which may allow judges and lawyers to more fully understand the parameters and weights applied within.
Bot	An AI agent that mimics human behavior, capacity or processes.
Chatbot	An AI agent that simulates human customer service or conversational

	interactions by automating verbal and written responses to communicate with humans.
Cleaned	Data that has been labeled, relabeled or reviewed to ensure that data points are properly organized, appropriate, or equivalent. Sometimes outlying or irrelevant data may be removed.
Confidence Score	Any expression of certainty in the predictive accuracy of certain AI or ML applications. AI applications are imperfect and offer approximate results, decisions, or predictions that can be provided with a level of confidence. Few, if any, results an AI produce should be treated as a certainty. For example, the FBI facial identification software mentioned in the introduction is not designed or intended to match a single identity with a face. Rather it offers the user a range of potential matches based on potential pattern similarities or matches. The algorithm is reported to be accurate 86% of the time when the algorithm output offers the user at least fifty potential match pictures. Put another way, the AI has 86% confidence that the match will be one of the fifty given matches. Confidence scores are estimates, not guarantees of accuracy.
Connected Devices/ Internet of Things/ Sensors	Networks of devices, such as wearables (e.g., smart watches), thermostats and sensors on a refrigerator, industrial production line, or in a car that feed data to AI models in order to improve performance or generate predictions about the devices or the users of the devices.
Continuous Active Learning	A subset of machine learning in which models continuously learn and adapt based upon increasing amounts of iterative feedback.
Continuous Model Monitoring	Consistent vigilance over and review of a model's activity to track changes in the model and fitness for purpose.
Convolutional Neural Network	A machine learning technique often used for classifying or generating images and videos in unstructured or unlabeled data.

Data Bias	Datasets are compiled of data that is collected from information about historical events and as such are artifacts of human history. Data bias refers to datasets that can encode biases if used to train models that then predict future eligibility based upon those historical patterns.
Dataset	Collections of data used to train AI models.
Data Protection	Efforts and obligations to secure, obtain and use data according to prescribed standards.
Decommissioning	The act of removing an AI model from deployment once its function is complete or performance is degraded, or to correct errors or mitigate risk.
Deep Learning	Deep learning, a branch of machine learning, leverages multi-layered neural networks, termed deep neural networks (DNNs). Trained on extensive data sets, DNNs excel in identifying and classifying phenomena, discerning patterns and relationships, evaluating possibilities, and formulating predictions and decisions.
Design Objectives	Parameters and instructions that are outlined or defined in accordance with the purpose or goals for an AI system.
Dirty Data	Describes data that can be inaccurate, incomplete, or contain errors or volumes of extraneous material.
Drift	In AI, drift typically refers to the phenomenon of model performance degrading over time due to changes in the underlying data (concept drift) or changes in the external environment (data drift), rather than the model independently choosing new tasks.
Error Type One:	Indicates the presence of a fact or condition when that fact or condition is actually not present. Type Two: Indicates the absence of a fact or condition when that fact or condition is actually present.

Explainability	The feature of existing machine learning techniques that describes the degree to which the resulting model is able (or more likely unable) to provide an understandable explanation for how it reached its outputs. Generally, the more complex the models get, the harder it is for them to identify how and why they produce their particular outputs. In practice, this concept includes technology techniques that help approximate how a model produces an output as well as analog descriptions of processes for how decisions are made or influenced by AI model outputs.
Explainable AI	A distinct field of technical work dedicated to revealing model explainability and how certain AI models work and produce predictions.
Extended Reality	Extended reality (XR) specifically refers to all real-and-virtual combined environments and human-machine interactions generated by computer technology and wearables. It encompasses virtual reality (VR), augmented reality (AR), and mixed reality (MR), and does not necessarily need to be generated or enhanced by AI..
Extrapolation	Using known values or AI model outputs to estimate the value of unknown variables.
F1	The Harmonic Mean of Recall and Precision, often used in Information Retrieval studies to measure the effectiveness of a search or review effort, which accounts for the tradeoff between Recall and Precision.
Facial Recognition	A prominent class of AI applications that can detect a face and analyze its features (or "biometrics") and even predict the identity of that face. These AI applications are notable for their common use in criminal justice and national security as a means of identifying suspects or threats. Facial recognition algorithms can also be used to surveil more generally. Facial recognition may also be used as a biological "password" to authenticate an individual's identity (for example, to unlock a smartphone).

False Negative	Indicates the absence of a fact or condition when that fact or condition is actually present (a "type two error").
False Positive	Indicates the presence of a fact or condition when that fact or condition is actually not present (a "type one error").
Features	Measures or variables, often qualitative, that affect or distinguish categories of data points (e.g., height, weight, level of education) in structured data.
Gait Analysis	A form of biometric data analysis that evaluates the ambulatory motions of a person or mobile being.
Gaze Analysis	A form of biometric data analysis that evaluates retinal and eye movement to analyze patterns in motion.
Generative Adversarial Networks	GANs are a type of AI algorithm designed to generate data similar to the input data they have been trained on, and they can produce highly realistic and high-quality outputs. The main innovation of GANs is their ability to generate new data instances that resemble the training data.
Generative AI	Type of AI that uses a model’s own underlying logic and training to generate new artificial outputs or datasets.
Hacking	The act of gaining access to a system without authorization, often with the intention to manipulate or destroy it. Hacking can also be used as a means of testing a system's security and functionality.
Healthy Data	Datasets that contain accurate and complete data.
Human Bias	Whether implicit or explicit, existing human biases can make their way into AI systems through the sorts of use cases selected, how questions for AI models are framed, which data are selected, how model instructions are converted to

	code, and even how model outputs are interpreted or communicated to affected communities.
Human in-the-Loop	An autonomous AI system designed to work cooperatively with a human to complete its tasks. Often these AI defer to human judgment when making certain decisions, especially those with significant consequences or moral weight. Human in-the-loop systems generally seek a "best of both worlds" approach that maximizes the benefits of both human and AI decision making.
Human on-the-Loop	An autonomous AI system designed to work under human oversight, allowing the human to easily intervene if the AI's decisions are in error, pose significant danger, or are ethically compromising.
Human out-of-the-Loop	An autonomous AI system designed to operate without human oversight or involvement. Such systems do not facilitate easy human intervention if unethical or dangerous decisions are made.
Interpolation	Making discrete inferences within a constrained set of known data points.
Interpretability	Describes a model output or explanation that is understandable and intelligible to humans.
Image Recognition and Analysis	The use of AI models (usually computer vision) to detect, recognize and understand (living or material) objects in pictures or video.
Insights	AI system outputs containing actionable knowledge or information that can support a variety of human or technical functions, including decision making.
Labeled	Used to describe data that is tagged or annotated (usually by humans but sometimes by AI itself) with meaning and categories that reflect its understood contents, characteristics and features.

Machine Learning (ML)	A method of creating AI that relies on data, algorithms, and learned experience to refine algorithms and form intelligence. The premise of machine learning is that "intelligence" is not innate but must be learned through experience. Machine learning AI algorithms are "trained" by engineers who feed it mass amounts of data which it slowly learns to interpret and understand. In response to the data, the AI gradually tweaks its code to steadily improve its abilities. These tweaks add up over time, helping the AI create stronger predictions.
Merged	Used to describe individual datasets that have been combined to form larger, more representative or more complete data sets. Merging data sets requires systematic matching and cleaning and this process of “munging” by data scientists can be time-consuming and require great care.
Metaverse	No widely agreed upon definition, but generally refers to a collective virtual shared space, created by the convergence of virtually enhanced physical reality, virtual reality (VR), augmented reality (AR), and internet services. It suggests a future iteration of the internet, supporting persistent online 3D virtual environments through conventional personal computing, as well as VR and AR headsets..
Mixed Reality	A hybrid digital and physical setting that combines computer generated visual, auditory, haptic, or somatosensory information and phenomena with real-world objects and interactions.
Model Alignment	This term more broadly refers to ensuring that an AI model’s predictions or decisions align with human values, ethical principles, or specific operational goals. It’s not just about optimizing for an objective but ensuring that the model’s operation adheres to broader ethical or societal standards.
Model Training	An essential stage in AI model development that involves continuously feeding training data to the model and reviewing and/or adjusting certain model features or variables. Most models need many rounds of training and tuning.

Narrow AI	The ability of computational machines to perform singular tasks at optimal levels, or near optimal levels, and usually better than, although sometimes just in different ways, than humans. Under this umbrella falls many single or limited purpose AI technologies such as facial recognition algorithms, driverless cars, and drones, among others. These technologies are intelligent in one or a few domains, limiting their ability to handle complexity or tasks outside of their intended purpose. All AI currently in use falls in this category.
Natural Language Processing	A machine learning technique that analyzes large quantities of human text or voice data (transcribed or acoustic) for specified features, including, but not limited to, meaning, content, intention, attitude and context.
Neural Network	A set of algorithms modelled (roughly) to mimic the human brain that identify the relationships between data points in a network-map like fashion. Neural networks contain a multitude of interconnected artificial neurons, or nodes, that are assigned weights and biases and are organized into at least three layers (input, hidden, and output).
Open Data	Publicly available data that can be accessed or used with or without a license.
Output	The result or value produced by an AI model. Outputs are generated from combining input data with the model, and fundamentally are predictions.
Overfitting	Overfitting occurs when a model learns the detail and noise in the training data to the extent that it performs poorly on new data. It's not just about correlating data too narrowly but about a model capturing noise or random fluctuations in the training data as if they were significant features, which impacts its ability to generalize to new data.
Oversight and Accountability	Generally refers to how AI systems are governed and by whom, and how risk and responsibility are allocated across these processes.

Parameter	In machine learning, parameters are the parts of the model that are learned from the training data, such as the weights in a neural network. They are not variables or aspects of the data the model was trained on (those would be features or inputs), but rather the internal configurations that the algorithm adjusts to make accurate predictions. Parameters are what the model learns through training, distinct from the features (data inputs) it uses to make predictions.
Poisoned	Datasets that have been tampered with, manipulated, or otherwise distorted in a manner that negatively impacts the quality and utility of the dataset.
Precision	Precision in AI and machine learning specifically refers to the number of true positive results divided by the number of all positive results, including those not correctly identified. It measures how many of the items identified as relevant are indeed relevant.
Predictions	AI model outputs that result from correlating information and recognizing patterns from past events or instances (data) with new data to forecast the likelihood of an event or instance occurring in the future – meaning AI models offer probabilities and carry inherent uncertainty.
Predictive Analytics	The overarching category of statistical tools and models that can use and analyze historical data to make predictions about the future to inform decision-making.
Privacy	No widely agreed upon definition, but generally the broad category of personal interests associated with being free from unauthorized observation, surveillance, or intrusion.
Probabilities	Calculations that predict the likelihood of the occurrence of a certain event.
Production Data	The data used by the model once it is released for operational or commercial use.

Proprietary Data	Proprietary data belongs to and is reserved for its owner, who may decline to license or disclose it.
Recall	Recall in the context of machine learning and information retrieval is the measure of the model's ability to correctly identify all relevant instances within a dataset. Specifically, it is the number of true positive results divided by the number of true positives plus the number of false negatives.
Recommendation	A suggested outcome or course of action informed by a model's predictions.
Reinforcement Learning	Reinforcement involves learning from actions to achieve goals. In AI, it is a complex process where an agent learns to make decisions by taking actions in an environment to maximize some notion of cumulative reward.
Reliability	The ability of an AI model to produce consistent results over time.
Representative	A dataset is representative if it accurately and appropriately reflects or measures the population or phenomena it is intended to capture, relative to the purpose for which it will be used.
Responsible AI/Ethical AI/ Trustworthy AI	Concepts that are used to describe AI models and systems that are designed, built and operated with forethought and certain key attributes that protect human beings (such as fairness, safety, transparency and a respect for human autonomy) and denote a level of quality in their performance overall.
Risk Management	Establishing policies and practices to help manage and mitigate the risks posed by an AI system.
Robotic Process Automation	RPA technology automates repetitive and rule-based tasks by mimicking human interactions with digital systems. While AI capabilities can enhance RPA (creating intelligent process automation, or IPA), RPA itself does not inherently include AI tools for spatial navigation and task ordering.

Sentiment Analytics	Use of NLP and other AI techniques and inputs to correlate features of language (or facial movements, gaze, etc.) or other biometric data to analyze or predict humans' affective or emotional states.
Stochastic	Refers to AI models whose performance and outputs include some inherent level of uncertainty or randomness.
Structured Data	Data that is organized in standard formats and categorized contextually and relationally.
Supervised Learning	"Learning through instruction." A form of machine learning where engineers specify a desired out-come and feed the AI algorithm curated and labeled data to guide AI towards that outcome. For example, to teach a facial recognition AI to match names and faces, labeled facial data would be fed to its algorithm so it could learn which faces correspond to which names. This method is ideal for tasks with agreed-upon "correct" answers or decisions.
Synthetic Content/Deep Fakes	An AI-enabled technology that renders hyper-realistic content that can appear so real that it can exceed the capacity of human beings to detect it as fake.
Synthetic Data	Artificial data that is generated to have the same characteristics as real data but do not tie back to real people or events.
Technology Assisted Review	In the context of information science, mechanical systems for finding pertinent data in large datasets. Also/specifically, the use of algorithms to define and then narrow searches (of large quantities of data).
Test Data	The data used to evaluate how well a trained model is performing once it is built and before it is released.
Traceability	Refers to the availability of information related to an AI model's production

	and deployment, including, but not limited to, when and by whom it was created, the datasets on which it was trained, the population(s) and context(s) in which it is and was deployed, and its performance.
Training (Human)	Coursework, lectures or training for employees, customers, and managers who need either basic or specialized training to understand, operate and manage frontier technologies.
Training Data	The historical data used to develop and teach an AI model the logic and pattern recognition to generate desired predictions in the future.
Transfer Learning	Reusing and reapplying a pretrained model for a new problem set, use case, or in a context for which it was not initially designed or trained.
Transparency	Concept associated with communicating how a model or system operates, generates outputs or is expected to make an impact, including known limits.
Uncleaned	A dataset in its raw or unfinished form.
Underfitting	Underfitting occurs when a model is too simple to capture the underlying pattern in the data, resulting in poor performance on both training and unseen data. It’s not about assigning significance between features where none exists but about failing to model the relevant relationships in the data adequately.
Unlabeled	Data that lacks any information tags, annotations, or classifications.
Unstructured Data	Raw data or data points that lack any relational meaning or significance to one another.
Unsupervised learning	"Self-taught learning." A form of machine learning where unstructured and uncurated data is fed to a machine-learning algorithm which finds trends, patterns, and relationships in that data. This is useful for finding insights

	humans may have overlooked or cannot perceive. This method is ideal for appli-cations without a firm "answer" and general data analysis.
Use Case Selection	Choosing and articulating the business or other applied purpose or goal for which AI tools will be used and defining the context for their application.
Validity	No agreed definition, but validity in the context of AI and research broadly refers to the extent to which a tool measures what it is supposed to measure. Validity involves the accuracy and appropriateness of conclusions or inferences based on the model’s outputs.
Virtual Reality	Experiences that occur in entirely computer-simulated worlds, often immersive.