T1 Common Terms in Machine Learning

Term	Definition
Artificial Intelligence (AI)	A broad definition which describes the ability of a machine to demonstrate intelligent behavior. AI algorithms exhibit either nonadaptive (e.g. rule-based) or adaptive intelligence (e.g. machine learning).
Machine Learning (ML)	A type of AI that uses mathematical models to automatically map input to desired outputs in a way that does not rely on explicit rule-based programming.
Model	The algorithm, or mathematical machinery, used to perform an ML task.
Supervised Machine Learning	An approach to training ML algorithms in which a model is provided input (e.g. digital images) that is classified with a label. For example, a model used to distinguish images of cats from dogs would be shown many images of cats, labeled as cats, and many images of dogs, labeled as dogs—a process denoted as training. Following training, a user could show this model an image of a cat or dog without a label, and the model on its own should be able to classify the image.
Unsupervised Machine Learning	An approach to training ML models in which the input data has not been labeled, and the algorithm identifies patterns or regularities in the data.
Semisupervised Machine Learning	An approach to training ML models when the number of labeled input data are limited, but the available input dataset is large. A combination of supervised and unsupervised techniques use both labeled and unlabeled input data, respectively.
Computer Vision	A broad definition that describes the ability of a machine to extract useful features from a digital image and perform subsequent analysis to confer an understanding of the contents in that image.