

Ai Foundations Cheat Sheet

Term	Practical meaning
Artificial Intelligence	Systems performing tasks involving perception, prediction, reasoning, generation, decisions or action.
Algorithm	A defined method or procedure for solving a problem.
Model	A learned or designed representation used to produce an output.
Machine Learning	Methods that learn patterns from data.
Deep Learning	Machine Learning using neural networks with multiple processing layers.
Generative Ai	Systems that generate new text, images, audio, video or other content.
Training	Adjusting a model using data or experience.
Validation	Comparing development choices without using the final test evidence.
Testing	Final independent evaluation on unseen examples.
Inference	Using a trained model to produce an output.
Feature	An input variable or representation used by a model.
Label	A known target or category used in supervised learning.
Parameter	A value learned by the model.
Hyperparameter	A setting chosen before or during training.
Overfitting	Learning training-specific detail that does not generalize.
Generalization	Performing usefully on new, relevant data.

Important distinctions

- Algorithm $\neq$ model: the method learns or constructs the model.
- Ai $\neq$ automation: automation can follow fixed rules without learning.
- Accuracy $\neq$ usefulness: a technically strong result may still fail users.
- Generated fluency $\neq$ factual correctness: verify important claims.