AI GLOSSARY CHEAT-SHEET

Quick reference guide | 91 essential AI terms | Level Up AI Projects

AGI (Artificial General Intell

ADV

A theoretical form of AI that can perform any intellectual task that a human can do, with the

API (Application Programming I

BEG

A set of rules and protocols that allows different software applications to communicate

Accuracy

BEG

The percentage of correct predictions made by a model, calculated as the number of correct

Activation Function

INT

A mathematical function that enables neural networks to learn complex, nonlinear

Agent

INT

An AI system that can autonomously perceive its environment, make decisions, and take actions to

Algorithm

BEG

A set of step-by-step instructions that allows a computer program to learn from data, recognize

Anthropomorphism

BEG

The tendency to attribute human characteristics, emotions, or consciousness to AI systems, such as

Artificial Intelligence (AI)

BEG

The simulation of human intelligence in machines that are programmed to think, learn, and solve

Attention Mechanism

ADV

A technique in neural networks that allows the model to focus on specific parts of the input

Autoencoder

ADV

A neural network that learns to compress data into a lower-dimensional representation and then

Automation

BEG

The use of AI and technology to perform tasks without human intervention, increasing efficiency

Backpropagation

INT

A fundamental algorithm for training neural networks that calculates gradients and propagates

Batch Size

BEG

The number of training examples processed together in one iteration before the model

Bias

BEG

Systematic errors in AI models resulting from flawed training data, leading to unfair or

Big Data

BEG

Extremely large datasets that are too complex for traditional data processing methods, often used

Binary Classification

BEG

A type of classification task where the model predicts one of two possible outcomes, such as

CNN (Convolutional Neural Netw

INT

A specialized neural network architecture designed for processing grid-like data such as

Chatbot

BEG

An AI program that simulates human conversation through text or voice, designed to interact with

Classification

BEG

A machine learning task where the model assigns input data to predefined categories or classes.

Cloud Computing

BEG

Clustering

BEG

An unsupervised learning technique that groups similar data points together based on their

Computer Vision

BEG

A field of AI that enables machines to interpret and understand visual information from the world,

Data Mining

BEG

The process of discovering patterns, correlations, and useful information from large

Data Preprocessing

BEG

The process of cleaning, transforming, and organizing raw data before feeding it into a

Dataset

BEG

A collection of data used to train, validate, and test AI models, typically consisting of examples

Deep Learning

INT

A subset of machine learning that uses multi-layered neural networks to learn complex

Diffusion Model

ADV

A generative AI technique that learns to create data by reversing a process that gradually adds

Embedding

INT

A numerical representation of data (such as words or images) in a lower-dimensional space that

Epoch

INT

One complete pass through the entire training dataset during the training process of a machine

Ethics (AI)

BEG

Principles and guidelines aimed at ensuring AI systems are developed and used responsibly,

Explainability

BEG

The ability to understand and interpret how an AI model makes its decisions, important for trust

Feature

BEG

An individual measurable property or characteristic of data used as input for machine

Feature Engineering

BEG

The process of selecting, creating, and transforming features from raw data to improve

Fine-tuning

INT

The process of taking a pre-trained model and further training it on a specific dataset to

GAN (Generative Adversarial Ne

ADV

A type of AI architecture consisting of two neural networks—a generator and

GPU (Graphics Processing Unit)

BEG

A specialized processor originally designed for graphics but now widely used to accelerate AI

Generative AI

BEG

AI systems capable of creating new content such as text, images, music, or code based on patterns

Gradient Descent

INT

An optimization algorithm that iteratively adjusts model parameters to minimize the loss

Guardrails

BEG

Safety measures and restrictions implemented in AI systems to prevent harmful, biased, or

Hallucination

BEG

When an AI model generates false or nonsensical information while presenting it confidently as if

Hyperparameter

INT

A configuration setting that controls the learning process of a model, such as learning

Image Recognition

BEG

The ability of AI systems to identify objects, people, places, and actions in images, a key

Inference

BEG

The process of using a trained AI model to make predictions or generate outputs on new, unseen

Instance Segmentation

ADV

A computer vision task that identifies and delineates each individual object instance in an

LLM (Large Language Model)

BEG

A type of AI model trained on massive amounts of text data to understand and generate human-like

Label

BEG

The correct answer or target output associated with a training example in supervised learning.

Latency

BEG

The time delay between when an AI system receives an input and when it produces an output or

Learning Rate

INT

A hyperparameter that controls how much model weights are adjusted during training in response

Loss Function

INT

A mathematical function that measures how well a model's predictions match the actual target

Machine Learning

BEG

A branch of AI that enables computers to learn from data and improve their performance without

Model

BEG