Concept / Term	Simple Explanation	Why It Matters
AI (Artificial Intelligence)	Machines that mimic human intelligence	Foundation of all smart systems
ML (Machine Learning)	AI that learns from data	Helps machines improve over time
DL (Deep Learning)	ML using neural networks with many layers	Powers image, speech & large models
LLM (Large Language Model)	A type of AI trained on massive text data	Powers tools like ChatGPT, Claude
Dataset	A structured collection of data	Used to train ML/AI models
Training	Teaching the model using data	Where learning actually happens
Model	The trained AI system that makes predictions	Final result of training
Supervised Learning	ML with labelled data (e.g., cat vs dog)	Most common ML method
Unsupervised Learning	ML with no labels, just patterns	Used in clustering, anomaly detection
Classification	Predicting categories (e.g., spam or not)	Used in NLP, image detection
Regression	Predicting numbers (e.g., price, score)	For forecasting, analytics
Accuracy	% of correct predictions	Basic performance metric
Overfitting	Model memorizes instead of generalizing	Leads to poor real-world results
Neural Network	Layers of nodes that mimic a brain	Core of deep learning models
Token	A word or part of a word AI reads	Important for text-based models
Embedding	Text or image converted to number form	Used for similarity and search
Prompt	Input you give to an AI model	Key in GenAI like ChatGPT
Inference	Using the model to make predictions	What happens after training
RAG (Retrieval-Augmented Generation)	AI pulls external data before responding	Makes LLMs more accurate
Hallucination	AI generates wrong or fake information	Big issue in GenAI models
Python	Most popular AI programming language	Recommended for beginners
Jupyter Notebook	A tool to write, test, and visualize AI code	Beginner-friendly coding space
scikit-learn	Library for ML algorithms	Great for simple ML projects
TensorFlow / PyTorch	Libraries for deep learning	Power large-scale models