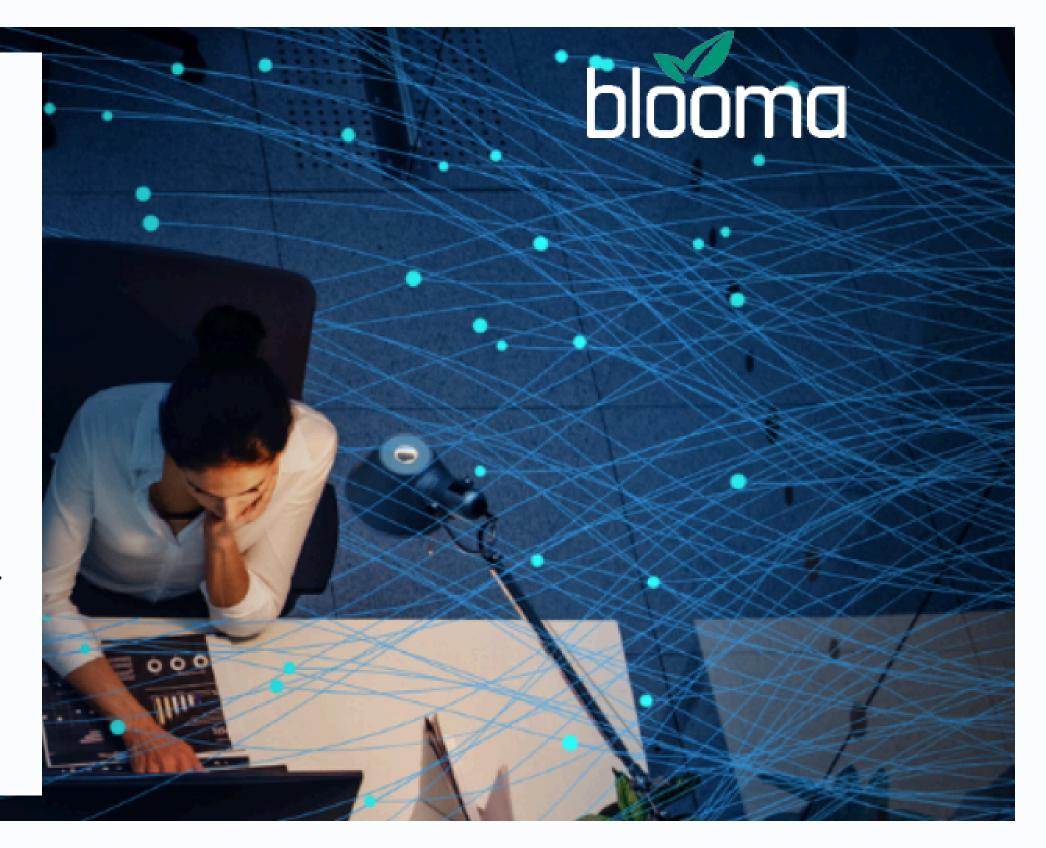


# Artificial Intelligence Layers

Understanding the hierarchy and relationships between AI technologies. From broad artificial intelligence to specialized applications that power today's innovations.





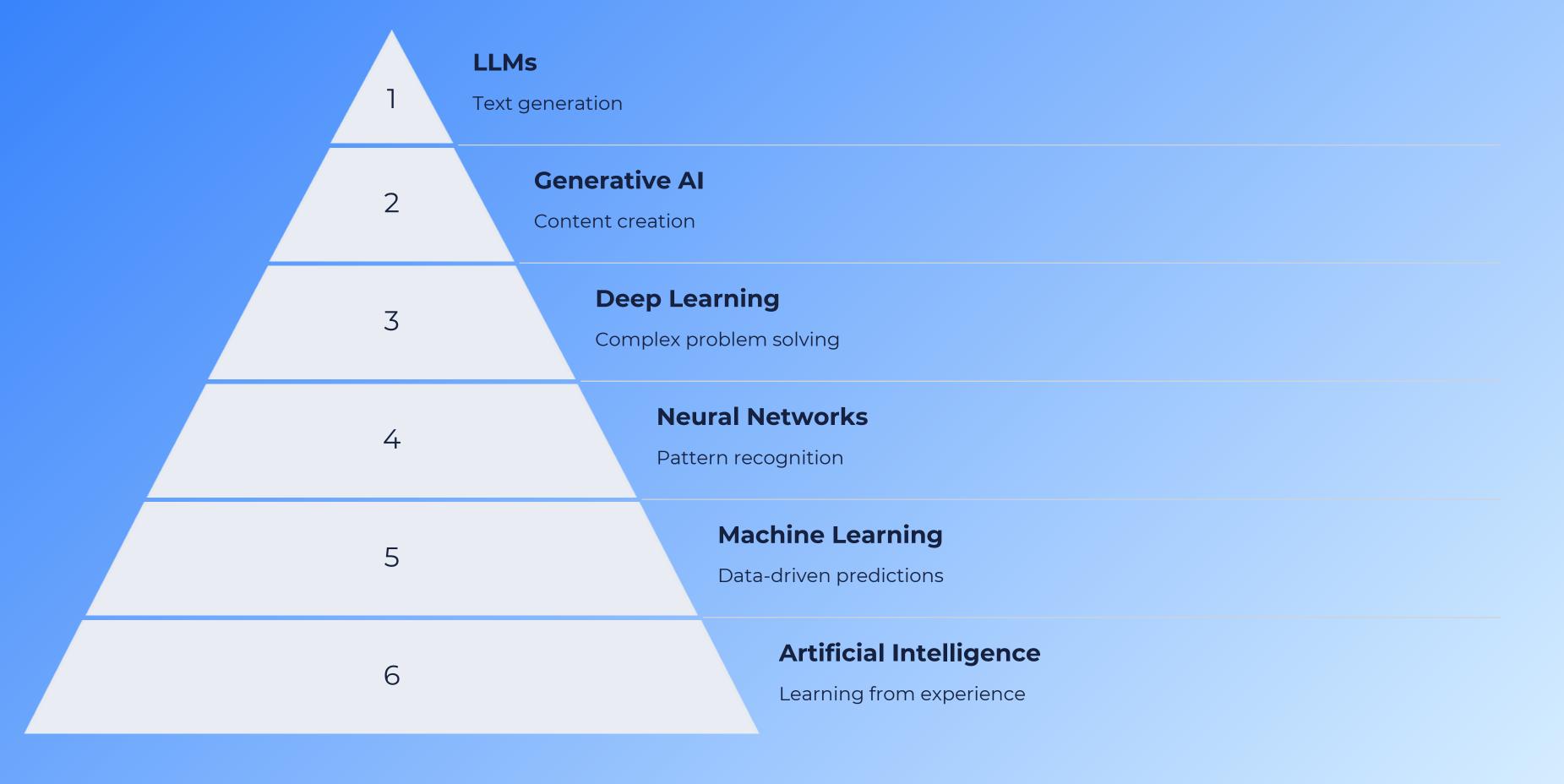
### The Basics First: What Is Al?

Artificial Intelligence (AI) is software that can learn from data or experience and perform tasks without being explicitly programmed for every step.

Al serves as the foundation for all the specialized technologies we'll explore, each building upon this core capability to learn and adapt.



#### **Artificial Intelligence Layers**





#### **Artificial Intelligence Layers**

#### **Core AI Technologies:**

**Artificial Intelligence (AI)** is software that can learn from data or experience and perform tasks without being explicitly programmed for every step.

Machine Learning (ML) is a subfield of Al. It is a program that trains a model from input data, and then that trained model can make useful predictions from new or never-before-seen data (as opposed to business rules).

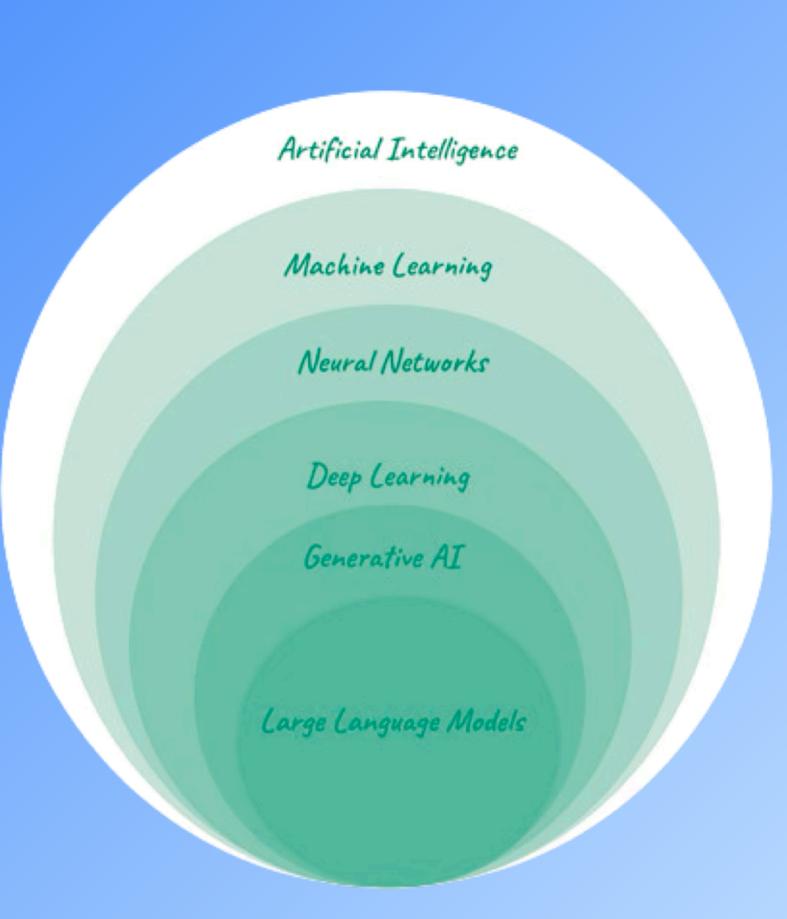
**Example:** Document classification

**Neural Networks (NNs)** The name and structure are inspired by the human brain, mimicking the way that biological neurons signal to one another

**Example:** Image recognition

**Deep Learning (DL)** is a subset of NN. The word deep refers to the depth of layers in a neural network. Models are well-suited for tackling complex real-world problems.

**Example:** Fraud detection (emphasis on cannot particularly explain reasoning)



#### **Advanced AI Applications:**

Generative AI (GenAI) is a subset of DL, a type of AI technology that can generate different types of content - such as text, imagery, audio, video - based on what it learns from existing content.

Example: Generate a marketing video of the property

A Large Language Model (LLM) is a form of generative AI that focuses on generating human-like text based on patterns learned from vast amounts of textual data during the training process.

**Example:** Auto-generation of an investment summary template

<u>Bonus</u>: **Evolutionary Algorithms** are a subfield of AI that solves complex problems by evolving candidate solutions through variation and selection, gradually improving performance over generations.

**Example:** Build conflict-free school timetables from countless possible combinations.



## Ready to See It in Action?

Schedule a Demo

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