LESSON 01

Introduction to AI for Librarians

Building a confident, critical foundation for AI in library practice

⏱ 60–90 min | All library professionals

You’ve met AI

AI is not arriving it's already here. Here's where you've likely encountered it:

Chatbots & Virtual Assistants

On library websites or discovery portals

Smart Search & Discovery

Relevance ranking in catalogues and databases

"You Might Also Like"

Recommendation engines in reading lists

Translation Tools

Used by patrons to navigate multilingual content

Auto-Summarization

In research databases and document tools

Generative AI Tools

ChatGPT, Copilot, Gemini used by your users every day

What is AI

The Working Definition

AI systems process large amounts of information, recognize patterns, generate outputs, provide summaries, classifications, and recommendations.

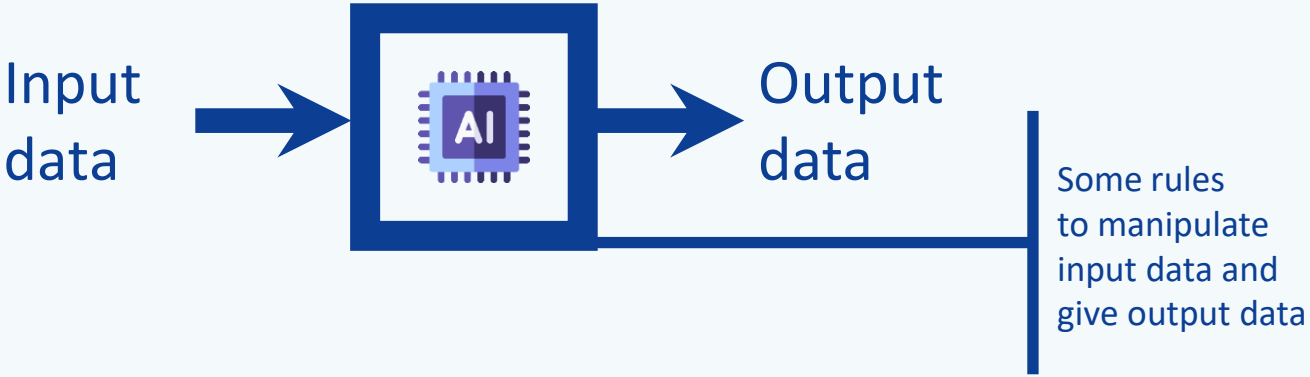
Unlike traditional search tools that retrieve what exists, AI can interpret, synthesize, and produce.

AI does not understand. It predicts based on patterns in the data it was trained on.

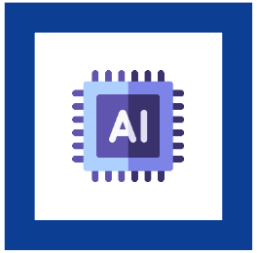
What AI Is NOT

- ✕ Conscious or sentient
- ✕ Neutral or objective
- ✕ Always accurate
- ✕ A replacement for human judgment
- ✕ Magic it has real, knowable limits

AI – The system



AI – The system

Input data → 

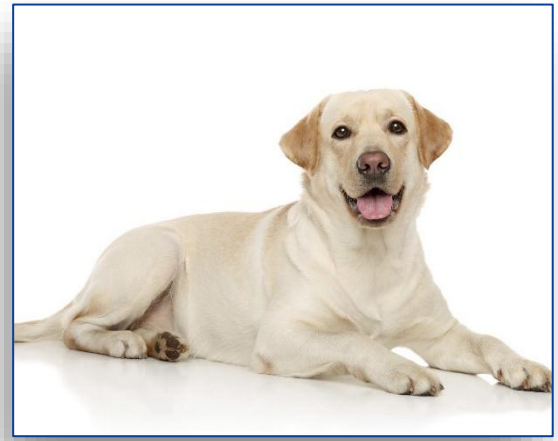
→ Output data

"Write a poem about French fries in the style of Shakespeare"

"Upon yon table, golden treasures lie,
a feast for mortals, 'neath the azure sky.
Behold, the humble spud transformed with care,
into slender strips, a culinary affair."

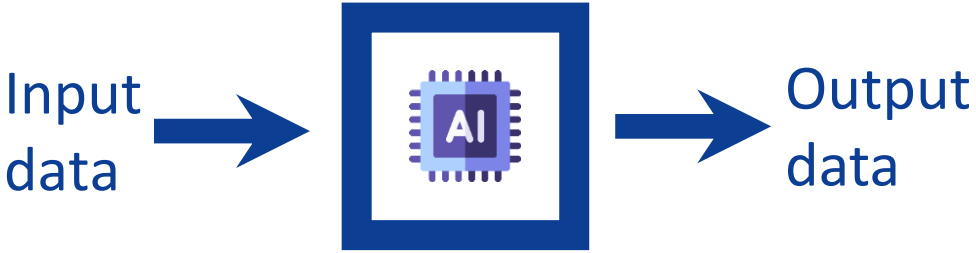
AI – The system

Input data → AI → Output data



Dog

AI – The system



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AI – The system

Emulation of intelligence

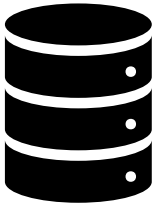
is not intelligence

AI is not **intelligent**

So how does it work ?

Example: classification of fruits

With classical AI (knowledge-based learning):



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Pictures + categories

Apple

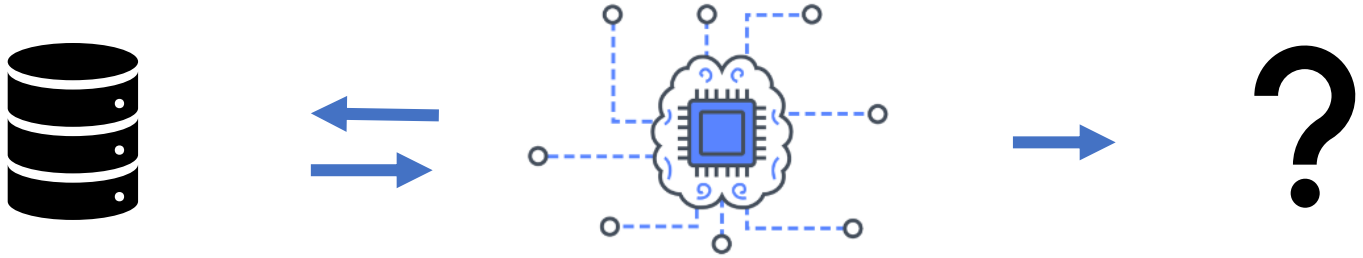
Banana

....

So how does it work ?

Example: classification

With Machine learning:

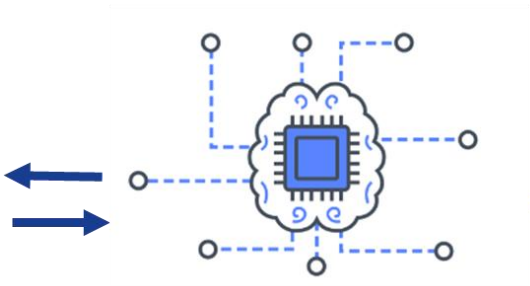


So how does it work ?

Example: classification

No.	Number of times pregnant	Plasma glucose concentration	Diastolic blood pressure	Triceps skin fold thickness	2-Hour serum insulin	Body mass index	Diabetes pedigree function	Age	Diabetes
1	6	148	72	35	0	33.6	0.627	50	tested_positive
2	1	85	66	29	0	26.6	0.351	31	tested_negative
3	8	183	64	0	0	23.3	0.672	32	tested_positive
4	1	89	66	23	94	28.1	0.167	21	tested_negative
5	0	137	40	35	168	43.1	2.288	33	tested_positive
6	5	116	74	0	0	25.6	0.201	30	tested_negative
7	3	78	50	32	88	31.0	0.248	26	tested_positive
8	10	115	0	0	0	35.3	0.134	29	tested_negative
9	2	197	70	45	543	30.5	0.158	53	tested_positive
10	8	125	96	0	0	0.0	0.232	54	tested_positive
11	4	110	92	0	0	37.6	0.191	30	tested_negative
12	10	168	74	0	0	38.0	0.537	34	tested_positive
13	10	139	80	0	0	27.1	1.441	57	tested_negative
14	1	189	60	23	846	30.1	0.398	59	tested_positive

Data



Model

Diabetes prediction

AI History

Breakout Group Activity

AI History

Dates : 1950,1956,1958,1959,1965,1973,2009,2011,2022

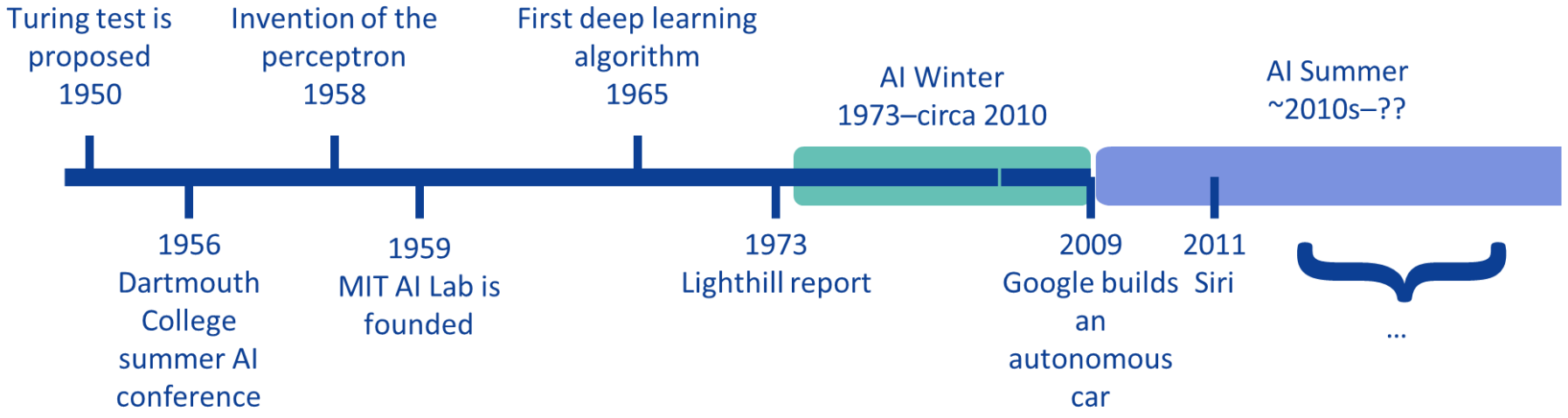
Events :

- Dartmouth conference(Birth of AI)
- Invention of the perceptron
- Turing test
- Rise of Gen AI
- MIT AI Lab is founded
- First deep learning algorithm
- Lighthill report
- First Autonomous Google Vehicle
- Launching of SIRI by Apple

AI History

- **Dartmouth conference(Birth of AI):** seminal workshop where leading scientists gathered to propose that human intelligence could be simulated by machines.
- **Perceptron**: a simple algorithm that helps computers make basic decisions by weighing input data, like how a person might decide based on pros and cons.
- **Turing test** : The Turing Test is a measure of a machine's ability to exhibit intelligent behavior indistinguishable from that of a human, as judged through natural language conversation.
- **Deep learning algorithm**: a type of artificial intelligence that teaches computers to learn and make decisions by recognizing patterns in data.
- **Lighthill report**: a critical review in the that exposed the limitations of early AI research.

AI – The system



Types of AI You'll Encounter now

📖 Language Models (LLMs)

Generate, summarize, translate, and answer questions using text. Examples: ChatGPT, Claude, Gemini.

🔎 Search & Retrieval AI

Rank results, match queries to content, suggest related resources in catalogues and databases.

🗂️ Classification & Tagging

Automatically assign subjects, categories, or metadata to documents and collections.

🔮 Recommendation Systems

Predict what users want next based on past behavior used in reading platforms and discovery tools.

The Librarian's Critical Lens

The skills you already use for evaluating sources apply directly to AI.

Source Evaluation	AI Evaluation
Who created this? What are their interests?	Who built this system? What data was it trained on?
Is this current and up to date?	When was this model trained? What's its knowledge cutoff?
Does this represent diverse perspectives?	Whose voices and data are represented and whose are missing?
Can I verify these claims elsewhere?	Can this output be traced to evidence? Or is it plausible-sounding fiction?
Is this tool appropriate for this user's needs?	Is this AI tool appropriate for this context and community?

AI – The system

In pairs or small groups:

1. Think of three digital tools or systems you use in your library (catalogue, website, communication tools, databases).

2. For each one — discuss: could AI be involved? What might it be doing? How would you know?

3. Share one example with the group. What questions does it raise?

Reflection: Did anything surprise you? Did you find AI where you didn't expect it or fail to find it where you did?

AI Key Vocabulary

Algorithm

A set of instructions that tells a system how to process data and reach an output.

Training data

The information used to teach an AI model its quality shapes everything the model does.

Model

The AI system that has been built and trained; what you interact with when you use an AI tool.

Hallucination

When an AI produces confident-sounding output that is factually wrong or entirely invented.

Bias

Systematic skewing in AI outputs, often reflecting imbalances or assumptions in the training data.

LLM

Large Language Model: an AI system trained on vast amounts of text to generate and process language.

Discussion

Q1 What AI tools if any does your institution currently use or plan to adopt? Who decided?

Q2 Have you been asked to use AI tools without being consulted? How did that feel?

Q3 What would your users need to know to engage with AI safely in your library?

Q4 What library values feel most at stake as AI enters your workflows?