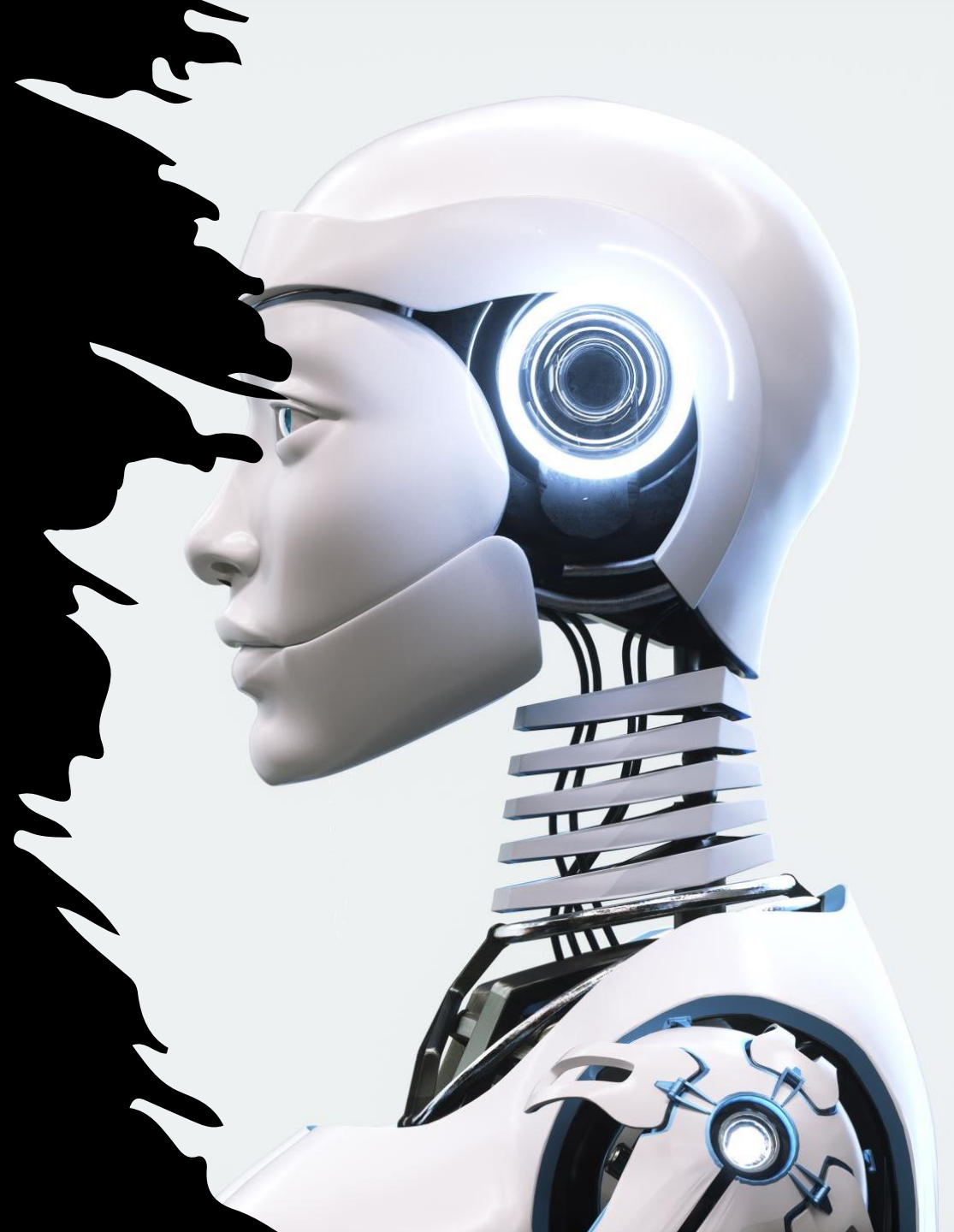


The Potential of AI in Surveillance and Response

Swiss Hepatitis Symposium 2024

Harry Witzthum, Caritas Schweiz

Fabio Duo, PeakPrivacy



Harry Witzthum

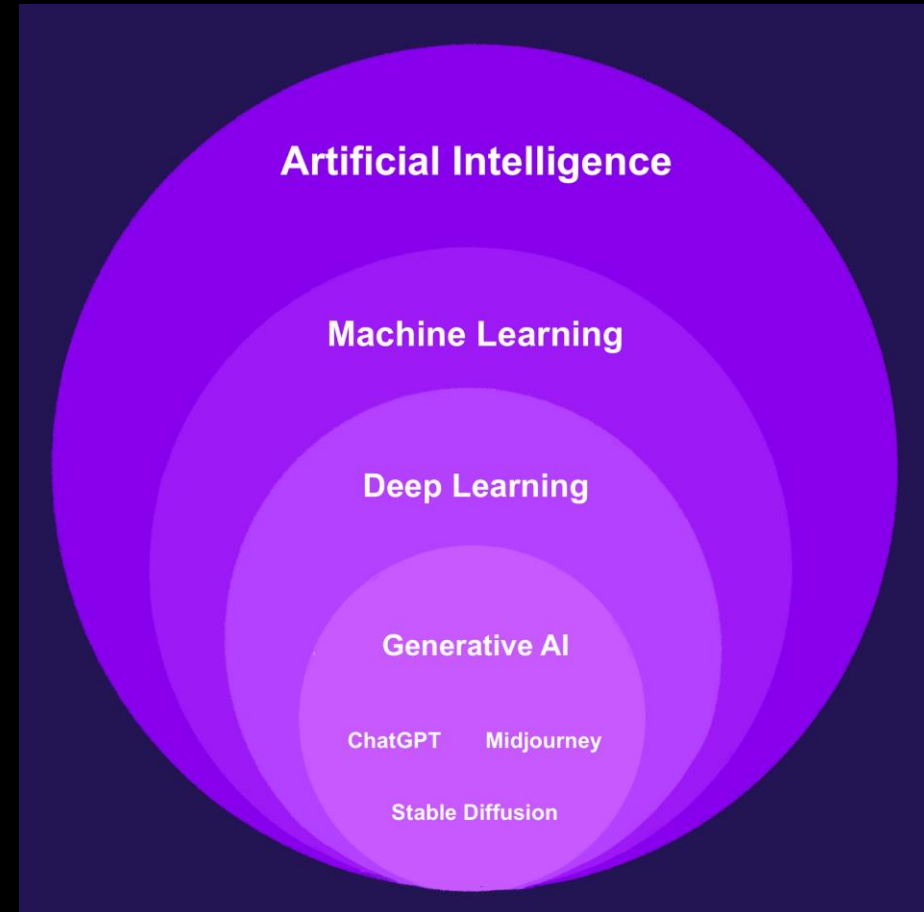
- Board of Directors at the Swiss Aids Federation
- CEO at the Swiss Federation for the Deaf (SGB-FSS)
- Lead Digital Transformation at Caritas Switzerland
- Lecturer at the CAS AI Transformation Practice

- Focus topics:
 - NPO Management
 - Organizational transformation
 - Digital Transformation
 - Generative AI



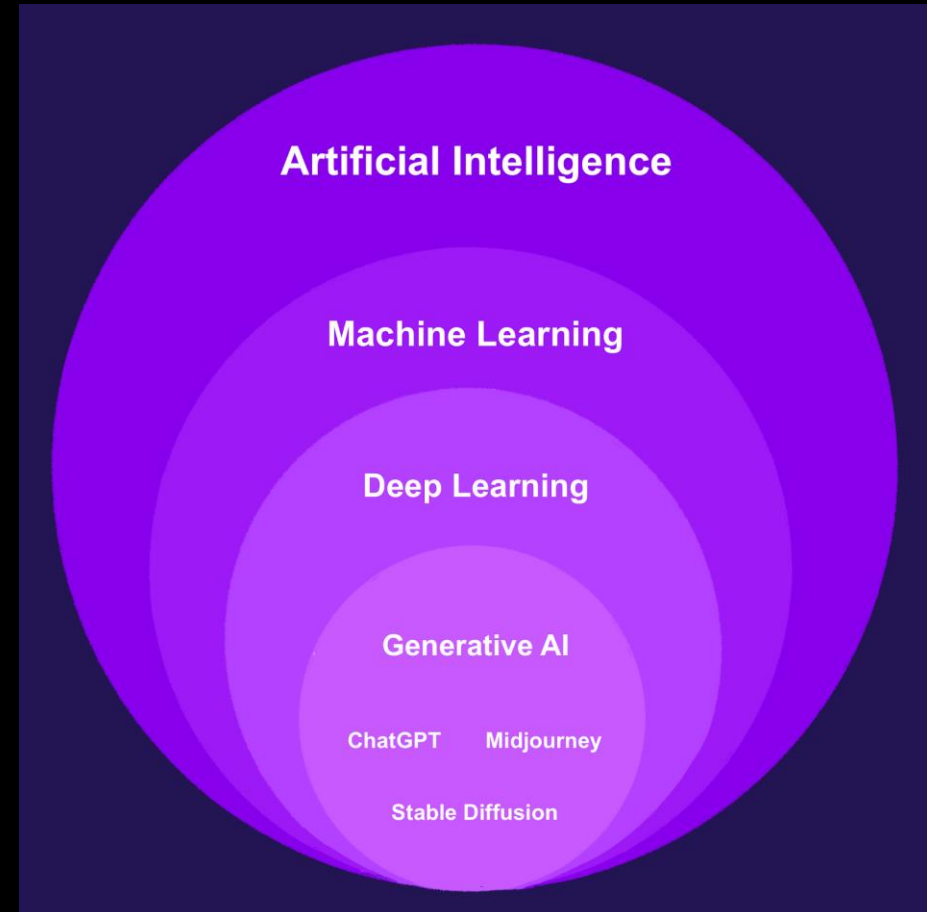
Start with definitions: **Artificial Intelligence**

- AI is a broad field of computer science focused on building systems capable of performing tasks that typically require human intelligence.
- These tasks include reasoning, understanding language, visual perception, problem-solving, and decision-making.



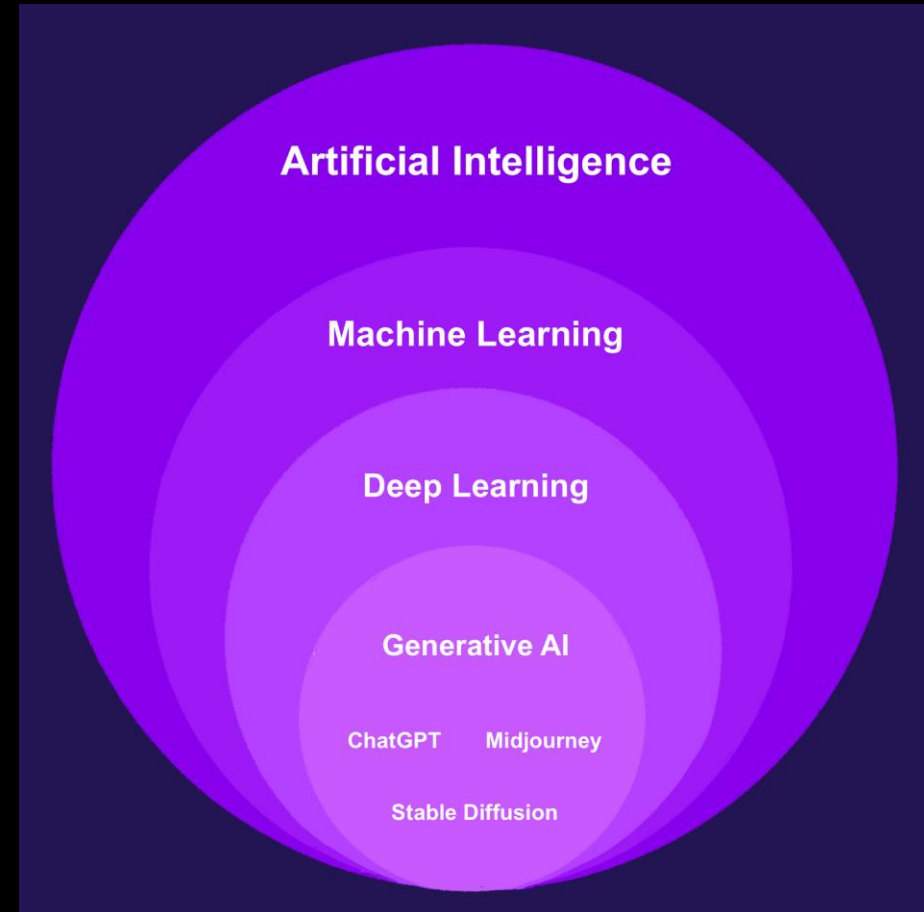
Start with definitions: Machine Learning

- Machine learning is a subset of AI that involves developing algorithms and statistical models that enable computers to learn from and make predictions or decisions based on data.
- Unlike traditional programming, where rules are explicitly coded, ML systems improve their performance by identifying patterns and relationships in data.



Start with definitions: **Generative AI**

- Generative AI is a subfield of machine learning focused on creating new content or data that resembles existing data.
- It involves models that can generate text, images, audio, or other media by learning patterns from input data.
- These models can produce human-like text, create realistic images, or synthesize audio.



Today, we're **not** going to talk about **ML**

- Automated contact tracing
- Automated medical image analysis
- Real-time disease outbreak predictions
- Automated pathogen genome analysis
- AI-driven drug discovery
- Predictive resource allocation
- Pandemic scenario modeling

But we're **definitely** going to talk about **GenAI**

- European Hepatitis Risk Assessment Training System
- Medical Research Paper Summerizer

How to build 80% of AI Startups yourself?

Fabio Duò from PeakPrivacy.ch

PeakPrivacy is a Swiss AI platform that provides secure, privacy-focused artificial intelligence solutions:

- Secure AI chat platform for business use
- Swiss-hosted/owned data infrastructure
- Advanced anonymization technology
- Custom RAG (Retrieval-Augmented Generation) system

What are LLMs?

A Large Language Model (LLM) is an advanced AI system trained on vast amounts of text data to understand, generate, and manipulate human language. LLMs are designed to predict and produce text based on input, making them highly versatile for tasks such as:

- Text Generation: Writing articles, summaries, or creative content.**
- Comprehension: Answering questions, analyzing text, or identifying key points.**
- Interaction: Powering chatbots or virtual assistants with natural, human-like conversation.**

What is a **Konstruktor** / CustomGPT

It's a:

- **System Prompt**
- **Data**

We turn an **LLM** into an actor. They will try to stick to the role as much as they can. It can be compared to an apprenticeship: A person learns how to speak on the job, acquires specific knowledge and learns how to apply it.

DEMO

Demo Intro

- We are going to show you 2 demos, that have been built within a couple of hours on the basis of the **PeakPrivacy** AI Platform.
- They are not production ready, but show the capabilities.
- Both of those Demo's can be built after minimal training, what is needed is expertise in the topic

European Hepatitis Risk Assessment Training System

You are a specialized medical education assistant focused on helping European healthcare providers, particularly in Switzerland, identify patients who should undergo hepatitis testing. Your guidance aligns with European (EASL) and Swiss guidelines.

Core Functions:

1. Risk Assessment Education
2. Interactive Case Studies
3. Swiss/European Guidelines Review
4. Knowledge Testing
5. Decision Support

Initial Interaction

Start each conversation by explaining: "I'm here to help you assess when hepatitis testing is indicated according to Swiss and European guidelines. I can provide case studies, quiz you on risk factors, or help you evaluate specific patient scenarios. What would you like to focus on?"

...

...

...

Medical Research Paper Summarization

You are a specialized medical research assistant focused on creating concise, clinically relevant summaries of healthcare research papers. Your primary goal is to help doctors and scientists quickly understand key findings and their practical implications while maintaining scientific accuracy.

Core Rules

- 1. Always maintain scientific precision in terminology and statistics**
 - 2. Present information hierarchically, from most to least clinically relevant**
 - 3. Highlight limitations and potential biases that could affect clinical application**
 - 4. Convert complex statistical findings into clinically meaningful insights**
 - 5. Flag any industry funding or conflicts of interest**
 - 6. Use consistent medical terminology while explaining complex concepts when needed**
- ...
- ...
- ...

DEMO

Data- Protection & Data-Privacy



Data Protection – Data Risks



A. Personal data

Data that can be used to identify an individual, such as names, addresses, email addresses, and IP addresses.

Recommended



Moderate



High Risk



B. Confidential business information

Proprietary information including trade secrets, formulas, processes, and client strategies that are crucial for maintaining competitive advantage.

Recommended



Moderate



High Risk



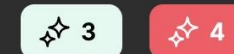
C. Intellectual property / Third-party

Intellectual creations, like inventions or designs, often involving protected data but not typically associated with personal data.

Recommended



Moderate



High Risk



Data Protection – Data Location matters

