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Machine Learning & Künstliche Intelligenz

Potenziale und Grenzen

Daten **Algorithmus** **Modell**


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Uh, ... Trainingsdaten herzustellen ist aber schon aufwändig.
Gibt es da nicht ein KI-Tool mit dem ich das machen kann
Image created with Dalle2

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Wie erzeugen ~~IT-Anwendungen~~ Wir Wertschöpfung?

Wertschöpfung

“

Bezeichnet die Summe der im Unternehmen innerhalb eines bestimmten Zeitraums erzeugten Güter und Leistungen als Differenz zwischen diesen Leistungen und der dazu eingesetzten Vorleistung (z. B. bezogene Lieferungen).

”

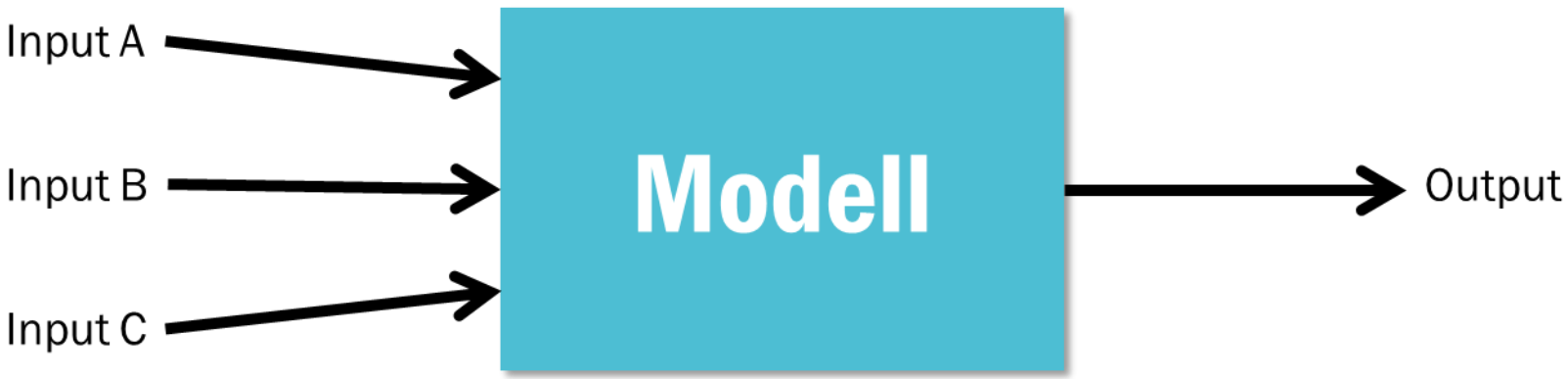
Dirks, B. (2024): Wertschöpfung. REFA International.

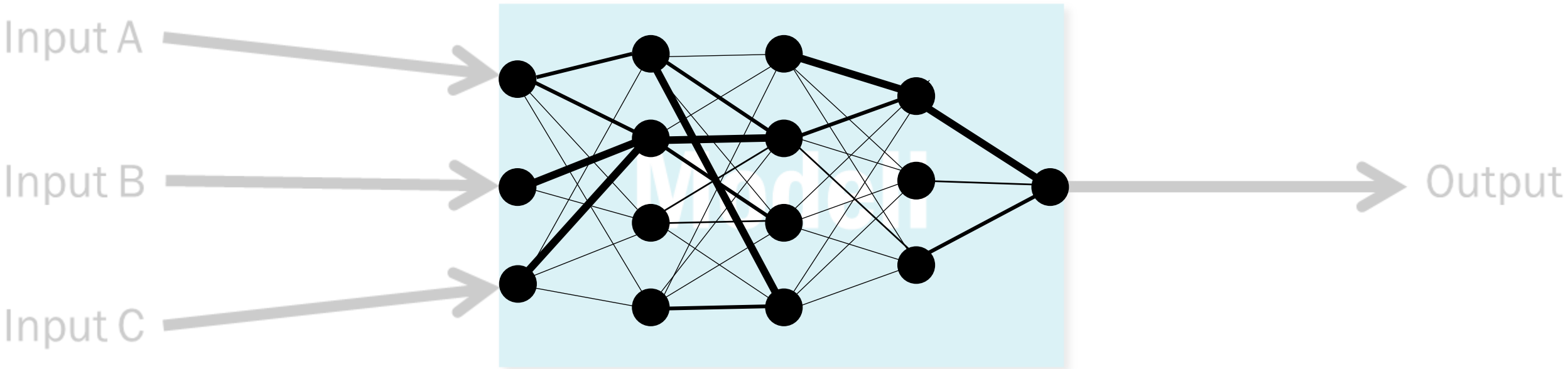
Daten **Algorithmus** **Modell**

Abbildungsfähig keit von Netzen beruht auf Millionen eingestellter Parameter

Pixelgenaue Annotation ist aufwändig

In den Trainingsdaten und im Training selbst steckt der Wert


Input A
Input B
Input C
Modell
Output


Input A
Input B
Input C
Modell
Output

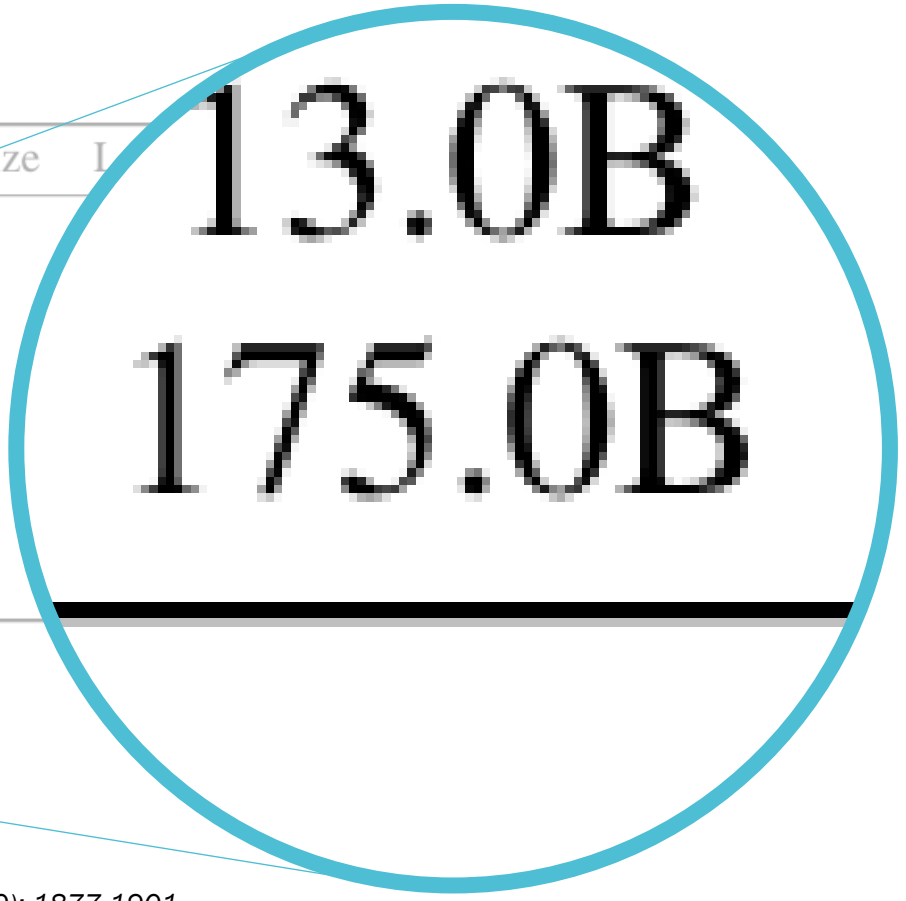
Beispiel GPT3.5: Trainingdaten

- CommonCrawl dataset (1 Trillion Wörter)
  - (1) downloaded and filtered a version of CommonCrawl
  - (2) performed fuzzy deduplication at the document level
  - (3) added high-quality corpora (WebText, Books1, Books2, Wikipedia EN)
- Unbeaufsichtigt trainiertes Transformer Sprachmodel

Brown, Tom, et al. "Language models are few-shot learners." Advances in neural information processing systems 33 (2020): 1877-1901.

Beispiel GPT3.5: Parameter

Model Name	n_{params}	n_{layers}	d_{model}	n_{heads}	d_{head}	Batch Size	L
GPT-3 Small	125M	12	768	12	64	0.5M	
GPT-3 Medium	350M	24	1024	16	64	0.5M	
GPT-3 Large	760M	24	1536	16	96	0.5M	
GPT-3 XL	1.3B	24	2048	24	128	1M	
GPT-3 2.7B	2.7B	32	2560	32	80	1M	
GPT-3 6.7B	6.7B	32	4096	32	128	2M	
GPT-3 13B	13.0B	40	5140	40	128	2M	
GPT-3 175B or "GPT-3"	175.0B	96	12288	96	128	3.2M	



Alleine das Modell benötigt 350GB Speicher

Brown, Tom, et al. "Language models are few-shot learners." Advances in neural information processing systems 33 (2020): 1877-1901.

Choose a conversation style

GPT-4 Creative | Fast Balanced | GPT-4 Precise

zeichne ein bild von einem brennenden Computer, der in ein regenbogenfarbenes Meer stürzt

89/2000

Und die Wertschöpfung?

There is no such thing

as a free lunch!

HBR AT LARGE

IT Doesn't Matter

by Nicholas G. Carr

As information technology's power and ubiquity have grown, its strategic importance has diminished. The way you approach IT investment and management will need to change dramatically.

In 1968, a young Intel engineer named Ted Hoff found a way to put the circuits necessary for computer processing onto a tiny piece of silicon. His invention of the microprocessor spurred a series of technological breakthroughs – desktop computers, local and wide area networks, enterprise software, and the Internet – that have transformed the business world. Today, no one would dispute that information technology has become the backbone of commerce. It underpins the operations of individual companies, ties together far-flung supply chains, and, increasingly, links businesses to the customers they serve. Hardly a dollar or a euro changes hands anymore without the aid of computer systems.

As IT's power and presence have expanded, companies have come to view it as a resource ever more critical to their success, a fact clearly reflected in their spending habits. In 1965, according to a study by the U.S. Department of Commerce's Bureau of Economic Analysis, less than 5% of the capital expenditures of American companies went to information technology. After the introduction of the personal computer in the early 1980s, that percentage rose to 15%. By the early 1990s, it had reached more than 30%, and by the end of the decade it had hit nearly 50%. Even with the recent sluggishness in technology spending, businesses around the world continue to spend well over $2 trillion a year on IT.

But the veneration of IT goes much deeper than dollars. It is evident as well in the shifting attitudes of top managers. Twenty years ago, most executives looked down on computers as proletarian tools – glorified typewriters and

Carr, N. G. (2003). IT doesn't matter. *Educause Review*, *38*, 24-38.

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AI does not Matter!

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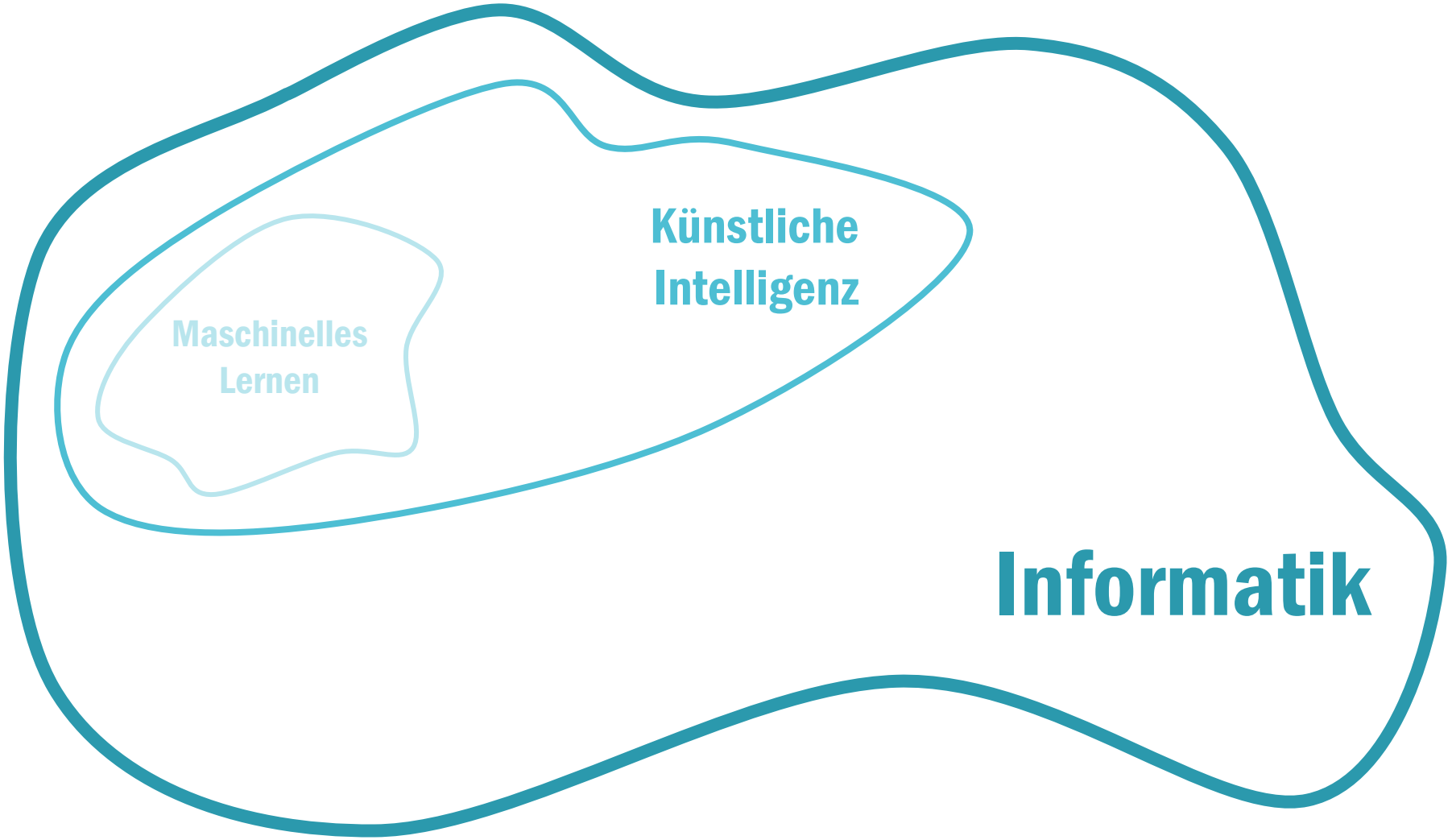
Danke



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