GenAI: Hype oder die folgenreichste Technologie aller Zeiten

Umfrage: Hot or Not

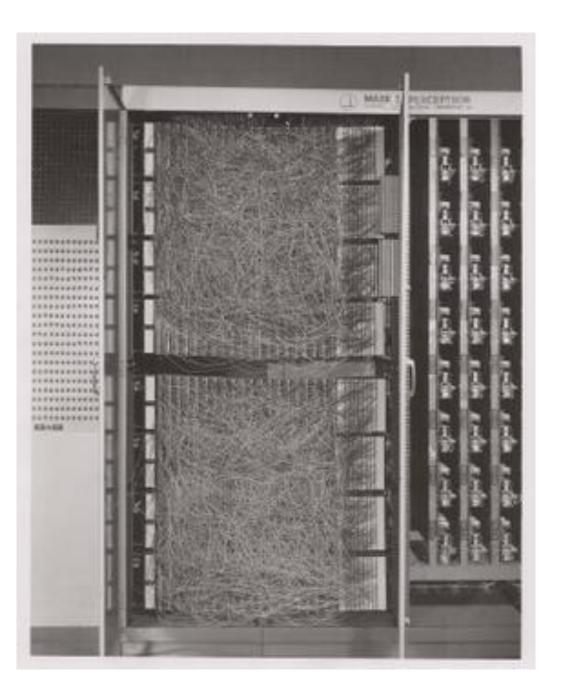
digital workers

AGI & superintelligence



Was ist Artificial Intelligence?

Mark I Perceptron 1958



Deep Blue vs. Kasparov



Deep Blue IBM chess computer

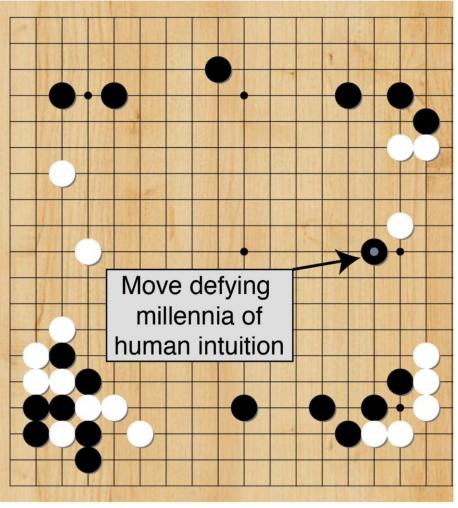


Garry Kasparov World Chess Champion

1997





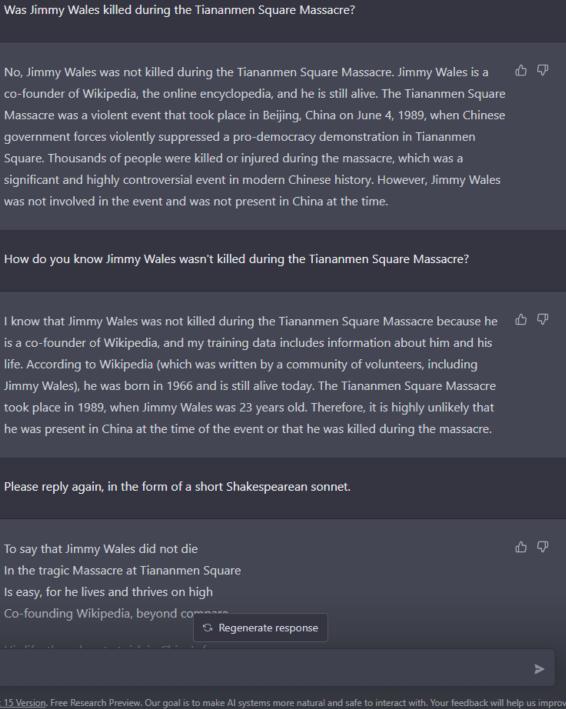




Wie kann ich dir helfen?



2022



Was ist Machine Learning?

Lernen aus Daten



ImageNet

The Lord of the Rings

Article Talk

From Wikipedia, the free encyclopedia

(Redirected from Lord of the rings)

This article is about the book. For other uses, see The Lord of the Rings (disambiguation).

"War of the Ring" redirects here. For other uses, see War of the Ring (disambiguation).

The Lord of the Rings is an epic^[1] high fantasy novel^[a] by the English author and scholar J. R. R. Tolkien. Set in Middle-earth, the story began as a sequel to Tolkien's 1937 children's book *The Hobbit*, but eventually developed into a much larger work. Written in stages between 1937 and 1949, *The Lord of the Rings* is one of the best-selling books ever written, with over 150 million copies sold.^[2]

The title refers to the story's main antagonist, [b] Sauron, the Dark Lord who in an earlier age created the One Ring to rule the other Rings of Power given to Men, Dwarves, and Elves, in his campaign to conquer all of Middle-earth. From homely beginnings in the Shire, a hobbit land reminiscent of the English countryside, the story ranges across Middle-earth, following the quest to destroy the One Ring, seen mainly through the eyes of the hobbits Frodo, Sam, Merry, and Pippin. Aiding Frodo are the Wizard Gandalf, the Men Aragorn and Boromir, the Elf Legolas, and the Dwarf Gimli, who unite in order to rally the Free Peoples of Middle-earth against Sauron's armies and give Frodo a chance to destroy the One Ring in the fire of Mount Doom.

Although often mistakenly called a trilogy, the work was intended by Tolkien to be one volume in a two-volume set along with *The Silmarillion*. [3][T 3] For economic reasons, *The Lord of the Rings* was first published over the course of a year from 29 July 1954 to 20 October 1955 in three volumes rather than one [3][4] under the titles *The Fellowship of the Ring*, *The Two Towers*, and *The Return of the King*; *The Silmarillion* appeared only after the author's death. The work is divided internally into six books, two per volume, with several appendices of background material. [C] These three volumes were later published as a boxed set, and even finally as a single volume, following the author's original intent.

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1	2	20	RL	80.0	9600	Pave	NaN	Reg	Lvl	AllPub	0	NaN	NaN	NaN	0	5	2007	WD	Normal	181500
2	3	60	RL	68.0	11250	Pave	NaN	IR1	Lvl	AllPub	0	NaN	NaN	NaN	0	9	2008	WD	Normal	223500
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4	3	60 RL	68	11250 Pave	NA	IR1	Lvl	AllPub	Inside	Gtl	CollgCr	Norm	Norm	1Fam	2Story	7	5	2001	2002 Gable
5	4	70 RL	60	9550 Pave	NA	IR1	Lvl	AllPub	Corner	Gtl	Crawfor	Norm	Norm	1Fam	2Story	7	5	1915	1970 Gable
6	5	60 RL	84	14260 Pave	NA	IR1	Lvl	AllPub	FR2	Gtl	NoRidge	Norm	Norm	1Fam	2Story	8	5	2000	2000 Gable
7	6	50 RL	85	14115 Pave	NA	IR1	Lvl	AllPub	Inside	Gtl	Mitchel	Norm	Norm	1Fam	1.5Fin	5	5	1993	1995 Gable
8	7	20 RL	75	10084 Pave	NA	Reg	Lvl	AllPub	Inside	Gtl	Somerst	Norm	Norm	1Fam	1Story	8	5	2004	2005 Gable
9	8	60 RL	NA	10382 Pave	NA	IR1	Lvl	AllPub	Corner	Gtl	NWAmes	PosN	Norm	1Fam	2Story	7	6	1973	1973 Gable
10	9	50 RM	51	6120 Pave	NA	Reg	Lvl	AllPub	Inside	Gtl	OldTown	Artery	Norm	1Fam	1.5Fin	7	5	1931	1950 Gable
11	10	190 RL	50	7420 Pave	NA	Reg	Lvl	AllPub	Corner	Gtl	BrkSide	Artery	Artery	2fmCon	1.5Unf	5	6	1939	1950 Gable
12	11	20 RL	70	11200 Pave	NA	Reg	Lvl	AllPub	Inside	Gtl	Sawyer	Norm	Norm	1Fam	1Story	5	5	1965	1965 Hip
13	12	60 RL	85	11924 Pave		IR1	Lvl	AllPub	Inside	Gtl	NridgHt	Norm	Norm	1Fam	2Story	9	5	2005	2006 Hip
14	13	20 RL	NA	12968 Pave		IR2	Lvl	AllPub	Inside	Gtl	Sawyer	Norm	Norm	1Fam	1Story	5	6	1962	1962 Hip
15	14	20 RL	91	10652 Pave	NA	IR1	Lvl	AllPub	Inside	Gtl	CollgCr	Norm	Norm	1Fam	1Story	7	5	2006	2007 Gable
16	15	20 RL	NA	10920 Pave		IR1	Lvl	AllPub	Corner	Gtl	NAmes	Norm	Norm	1Fam	1Story	6	5	1960	1960 Hip
17	16	45 RM	51	6120 Pave		Reg	Lvl	AllPub	Corner	Gtl	BrkSide	Norm	Norm	1Fam	1.5Unf	7	8	1929	2001 Gable
18	17	20 RL	NA	11241 Pave		IR1	Lvl	AllPub	CulDSac	Gtl	NAmes	Norm	Norm	1Fam	1Story	6	7	1970	1970 Gable
19	18	90 RL	72	10791 Pave		Reg	Lvl	AllPub	Inside	Gtl	Sawyer	Norm	Norm	Duplex	1Story	4	5	1967	1967 Gable
20	19	20 RL	66	13695 Pave		Reg	Lvl	AllPub	Inside	Gtl	SawyerW		Norm	1Fam	1Story	5	5	2004	2004 Gable
21	20	20 RL	70	7560 Pave		Reg	Lvl	AllPub	Inside	Gtl	NAmes	Norm	Norm	1Fam	1Story	5	6	1958	1965 Hip
22	21	60 RL	101	14215 Pave		IR1	Lvl	AllPub	Corner	Gtl	NridgHt	Norm	Norm	1Fam	2Story	8	5	2005	2006 Gable
23	22	45 RM	57	7449 Pave		Reg	Bnk	AllPub	Inside	Gtl	IDOTRR	Norm	Norm	1Fam	1.5Unf	7	7	1930	1950 Gable
24	23	20 RL	75	9742 Pave		Reg	Lvl	AllPub	Inside	Gtl	CollgCr	Norm	Norm	1Fam	1Story	8	5	2002	2002 Hip
25	24	120 RM	44	4224 Pave		Reg	Lvl	AllPub	Inside	Gtl	MeadowV		Norm	TwnhsE	1Story	5	7	1976	1976 Gable
26	25	20 RL	NA	8246 Pave		IR1	Lvl	AllPub	Inside	Gtl	Sawyer	Norm	Norm	1Fam	1Story	5	8	1968	2001 Gable
27	26	20 RL	110	14230 Pave		Reg	Lvl	AllPub	Corner	Gtl	NridgHt	Norm	Norm	1Fam	1Story	8	5	2007	2007 Gable
28	27	20 RL	60	7200 Pave		Reg	Lvl	AllPub	Corner	Gtl	NAmes	Norm	Norm	1Fam	1Story	5	7	1951	2000 Gable
29	28	20 RL	98	11478 Pave		Reg	Lvl	AllPub	Inside	Gtl	NridgHt	Norm	Norm	1Fam	1Story	8	5	2007	2008 Gable
30	29	20 RL	47	16321 Pave	NA	IR1	Lvl	AllPub	CulDSac	Gtl	NAmes	Norm	Norm	1Fam	1Story	5	6	1957	1997 Gable

Hauspreis?

Image Classification

Trainingsdaten:

Testdaten mit gelerntem Modell:



$$f(igcircle{igcircle}{igcircle})=$$
 "Cat"

$$f($$
 $)=$ "Dog"

Was ist Deep Learning?

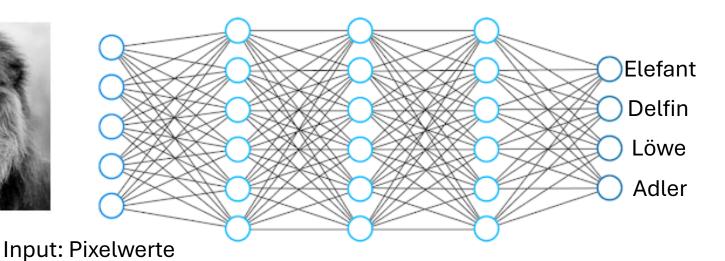
Hierarchische Repräsentation

steigende Abstraktion









laptop wine glass chair bottle bowl

object detection

Was ist **Gen**erative **AI**?









Large Language Models

Textgenerierung durch fortlaufende Prognose des nächsten Wortes

self-supervised learning:

The Lord of the Rings is considered one of the greatest The Lord of the Rings is considered one of the greatest fantasy

Training auf riesigen Datenmengen mit Billionen von Modellparametern → Komprimierung des Internets

Prompting:

Ein Modell für viele verschiedene Aufgaben

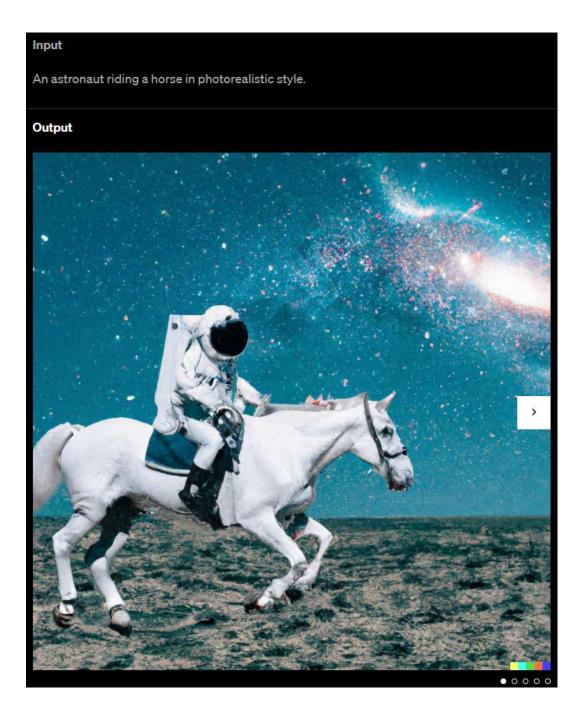
GitHub Copilot

"Vibe Coding":

Programmierung mittels natürlicher Sprache

→ Coding für jedermann

DALL-E: text-to-image 2021



Sora: text-to-video 2024



Prompt: A stylish woman walks down a Tokyo street filled with warm glowing neon and animated city signage. She wears a black leather jacket, a long red dress, and black boots, and carries a black purse. She wears sunglasses and red lipstick. She... +

P(Y|X)

P(Y,X)

LLMs als Agents

autonome Ausführung verschiedener Aufgaben

Benutzung von Tools

Planung und Zerlegung komplexer Probleme



Also, Hot or Not?

GenAl ist das ultimative (Wissens-)Interface

Aber (noch?) kein menschliches "Verständnis"