



AI in Action

Wie uns die Künstliche Intelligenz
bei der täglichen Arbeit
unterstützen kann

GSE Arbeitsgruppe Training
14. November 2023 in Dortmund

Wolfram Greis
wolfram.greis@mainframe-academy.de

Bletchley Park makes history again as host of the world's first AI Safety Summit

AI SAFETY SUMMIT

KI braucht Regeln – aber wer wird sie aufstellen?

Auf dem KI-Sicherheitsgipfel in England trafen Regierungsvertreter und Führungskräfte der Technikbranche zusammen. NGOs kritisieren die einseitige Ausrichtung auf »Sciencefiction«-Szenarien und fordern, die Menschen und konkrete Sicherheitsprobleme ins Zentrum der Regulierung zu rücken.

[Chris Stokel-Walker](#)

KI-Gipfel in Bletchley Park: Wie gefährlich ist diese Technologie?

03. November 2023



KI-Gipfel in Bletchley Park: Wie gefährlich i...

Von Elon Musk bis Robert Habeck diskutieren Politik...

00:00



1x



D:ECONOMY



DE



AI SAFETY SUMMIT

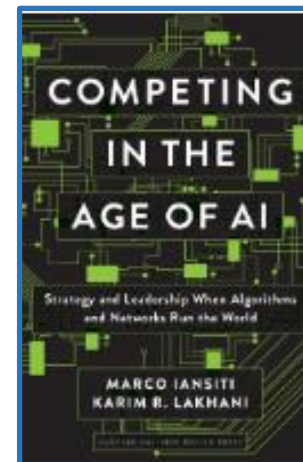
HOSTED BY THE UK
1-2 NOVEMBER 2023



Sich **nicht** mit KI zu beschäftigen, ist fahrlässig!

“Business leaders must experiment, create sandboxes, run internal bootcamps, and develop AI use cases **not just for technology workers**, but for all employees. Change and change management are skills that are no longer optional for modern organizations.”

Karim R. Lakhani, Professor at Harvard Business School



Menschen werden nicht durch die KI ersetzt, sondern durch Menschen, die sich mit KI auskennen und diese nutzen!

"Ab 2035 wird es keinen Job mehr geben, der nichts mit KI zu tun hat"

Hubertun Heil, Bundesminister für Arbeit

<https://web.de/magazine/politik/heil-2035-job-ki-38164072>



■ Die vier „A“ nach **Prof. Doris Weßels**, Fachhochschule Kiel:

- **A**ufklären
- **A**usprobieren
- **A**kzeptieren
- **A**ktiv werden



■ Studie von Boston Consulting Group unter Mitwirkung von **MIT Sloan, Warwick Business School und Wharton School**

■ Publiziert in der FAZ D:Economy: [Generative KI ...](#) am 24.9.2023

■ “On some tasks AI is immensely powerful, and on others it fails completely or subtly.”
Ethan Mollick, Co-Autor der Studie

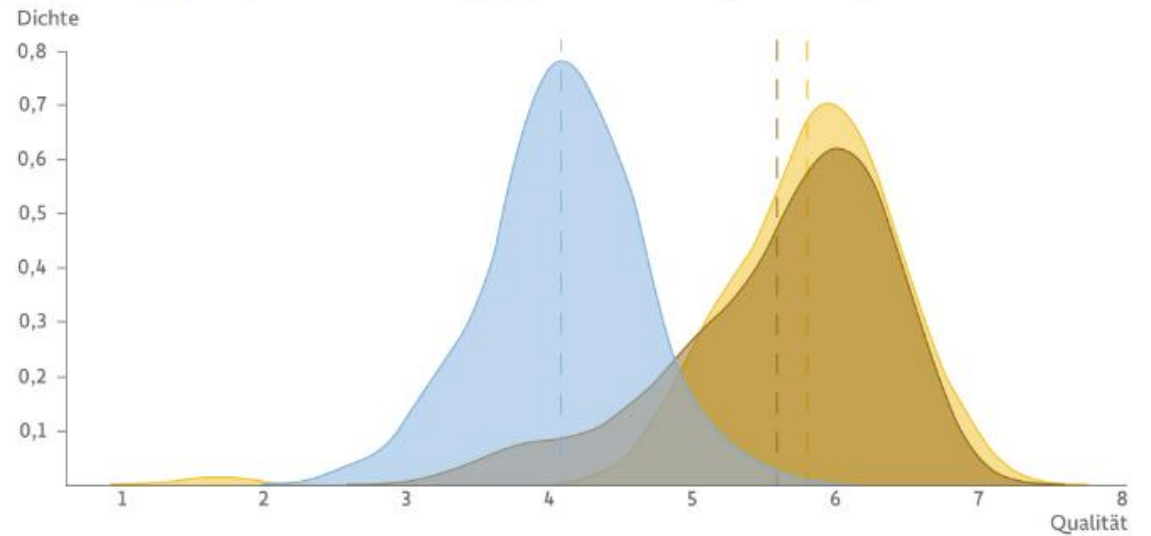
PRODUKTIVITÄT

Generative KI macht Wissensarbeiter 25 Prozent schneller und 40 Prozent besser

VON HOLGER SCHMIDT - AKTUALISIERT AM 22.09.2023 - 10:19

Wie generative KI die Arbeit verbessert

● Ohne KI ● Mit KI, aber ohne Schulung ● Mit KI und vorheriger Schulung



Wissensarbeiter, die KI einsetzten, erledigten im Durchschnitt

- **12,2 Prozent mehr** Aufgaben
- waren **25,1 Prozent schneller**
- erzielten **40 Prozent bessere** Ergebnisse als Menschen ohne KI-Einsatz.

Die Ergebnisse der Wissensarbeiter, die vorher zusätzlich eine **KI-Schulung** bekamen, waren im Durchschnitt noch besser und ihre Ergebnisse gleichmäßiger verteilt (höhere Dichte).

Grafik: kaho. / Quelle: Dell'Acqua et al. 2023

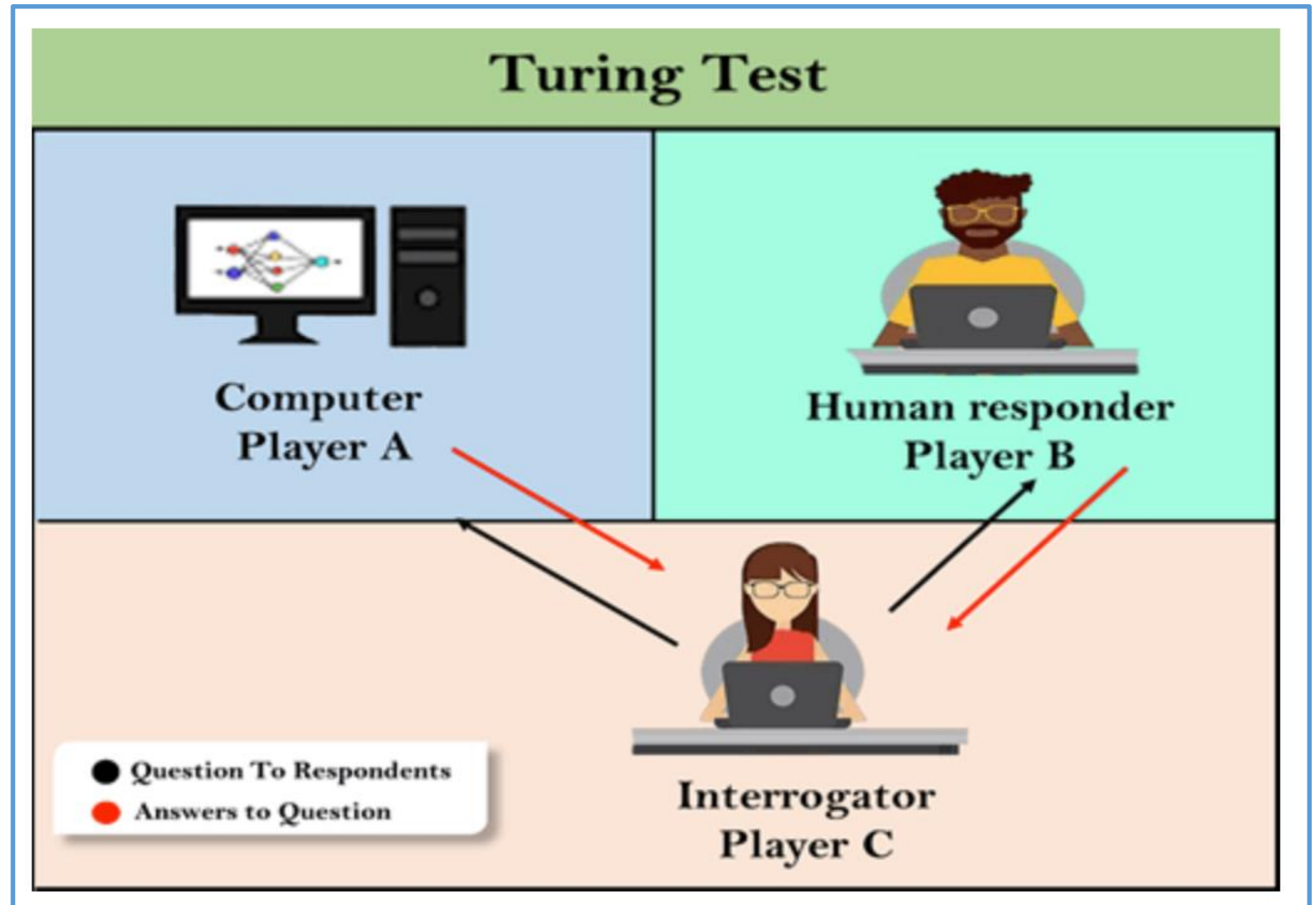
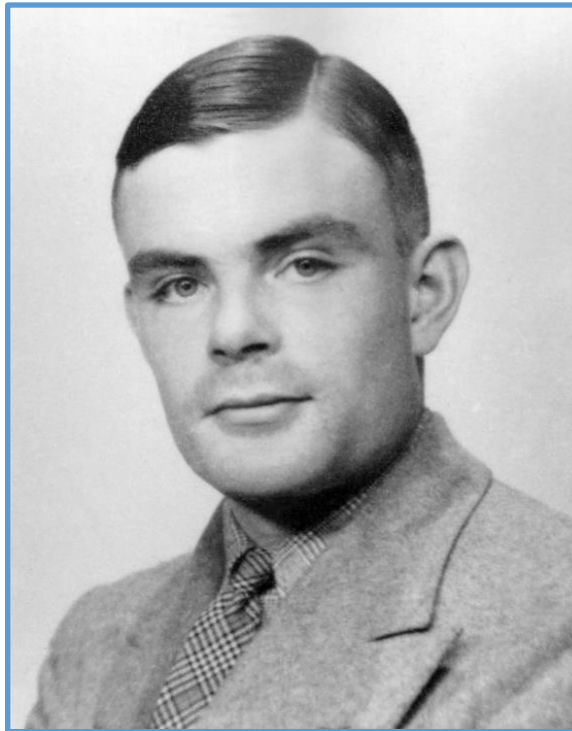
- AI History
- Generative Pre-trained Transformer – How do they Work?
- Prompt Engineering with Tips and Recommendations
- Search Engines and AI Tools
- Plug-ins

- Examples with **use cases** and **our daily work (with mainframes)**

History

- In 1950, computing pioneer Alan Turing predicted that within a few decades, computers would convincingly mimic human intelligence.

Paper: „Computing Machines and Intelligence“





Welcome to

```
EEEEEE LL      IIII ZZZZZZZ AAAAA  
EE     LL      II     ZZ  AA  AA  
EEEEEE LL      II     ZZZ  AAAAAA  
EE     LL      II     ZZ  AA  AA  
EEEEEE LLLLLL IIII  ZZZZZZZ AA  AA
```

Eliza is a mock Rogerian psychotherapist.
The original program was described by Joseph Weizenbaum in 1966.
This implementation by Norbert Landsteiner 2005.

```
ELIZA: Is something troubling you ?  
YOU:  Men are all alike.  
ELIZA: What is the connection, do you suppose ?  
YOU:  They're always bugging us about something or other.  
ELIZA: Can you think of a specific example ?  
YOU:  Well, my boyfriend made me come here.  
ELIZA: Is it important to you that your boyfriend made you come here ?  
YOU:  He says I'm depressed much of the time.  
ELIZA: I am sorry to hear that you are depressed.  
YOU:  It's true. I am unhappy.  
ELIZA: Can you explain what made you unhappy ?  
YOU:  █
```



Generative Pretrained Transformer – How Do They Work?

Sam Altman constantly points out the shortcomings of ChatGPT and repeatedly expresses that one **cannot rely on the statements of the software.**

Anyone who has half an understanding of how ChatGPT works can certainly understand that **the statements made by ChatGPT have to be questioned.**

■ Generative

- Large language models (LLMs) convert words into tokens and these into contextualized vector embeddings. They **generate contextually appropriate texts** based on statistical predictions.
- LLMs can be used to **modify, analyze, or create text in a variety of ways**: Sentiment detection, named entity recognition, and text summarization are just a fraction of these capabilities.

■ Pretrained

- Pretrained refers to the process by which the model is initially trained on a massive amount of data, usually a **vast amounts of text from the internet**. This initial training allows the model to learn a vast range of patterns, structures, facts, grammar, reasoning.

■ Transformer

- The term **transformer** refers to a specific **deep learning architecture** that was introduced in a 2017 paper titled "**Attention Is All You Need**" by Vaswani et al. at Google
- This architecture revolutionized the field of natural language processing due to its efficiency and capability to handle long-range dependencies in sequences.

- Large Language Models (LLMs)

- Produce a probability distribution of predicting the next word that follows "I am ..."

- happy

- sad

- rich

- poor

- making

- busted

- ...

- **Natural language** as an interface

It doesn't copy text passages, it generates new text!

Prompt Engineering – Tips and Recommendations

- Prompts are the foundation of most AI tools, including ChatGPT, MidJourney, Stable Diffusion and other tools.
- How well you can prompt defines the value you get from AI platforms.
- Prompt engineering is a mix of language skills, problem solving and applying logical thinking.
- **The average user will get average results.**
- We also use prompts to create images, audio or video
 - text to image
 - text to audio
 - text to video

- Dialog immer mit Kontext starten (Rolle, Zielgruppe, Format, ...)
- Zyklisch und iterativ vorgehen => Chained prompting
- Bei "Fehlern" nicht aufgeben, sondern anpassen und wiederholen => Debugging
- Auf Gross/Kleinschreibung verzichten, Stichworte genügen
- ChatGPT ist im Englischen besser.
- Ausgabe mehrfach generieren (regenerate response)
- Alte Frage nachträglich korrigieren (Edit Button)
- Neuen Chat beginnen, wenn Sie ein anderes Thema/Szenario wünschen

- Beispiel:
<https://chat.openai.com/c/5b2a5912-37a2-4600-b375-10c2f7de2e20>

Plug-ins



+ New chat

⌵

⚡ GPT-3.5

⚙️ GPT-4

No plugins enabled

Yesterday

Upload PDF Guide

Previous 30 D

zIIP on

XA Tran

Wolfran


Wolfran

Mainfra

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Plugin store


Popular New All



Ai PDF

Install

Super-fast, interactive ch of any size, complete with references for fact checki



KAYAK

Install


Search flights, stays & re recommendations where your budget.

< Prev 1 2 Next >

Plugin store

Popular New All Installed


Search plugins



A+ Doc Maker

Install


Generate beautiful PDFs in seconds. Resumes, cover letters, proposals and more. Also supports DOCX, XLSX, CSV...



A/B JUDGE

Install


Judge whether the A/B test results are superior or not.



AAASummarize.app

Uninstall


Summarize YouTube videos, web pages, and PDF documents by providing a link. This is a free preview.



Aardvark AI

Install


Search for Products on Google Shopping in Real-Time, No Ads, Only Trusted Stores.



ABC Music Notation

Install


Converts ABC music notation to WAV, MIDI, and PostScript files.



Able

Install


Use store addons without install! Simply type 'Able PlugName' for 1-click testing of chat extension and instant...



Able Style Fashion

Install

Able Style is a fashion assistant who will help you answer the question, 'What shall I wear today?'



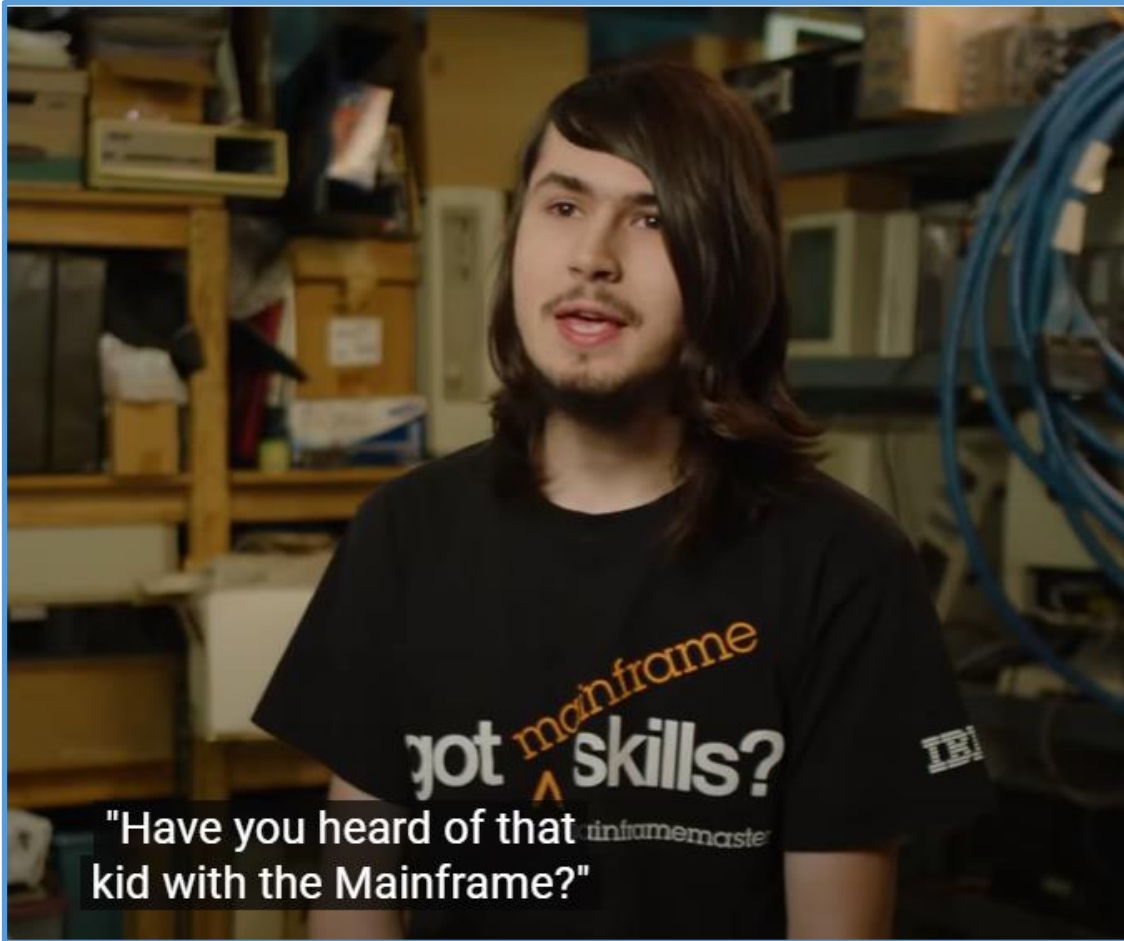
Abortion Informati...

Install

Abortion Information from the Abortion API.

< Prev 1 2 3 4 5 ... 95 96 97 98 Next >

About plugins



wo <https://www.youtube.com/watch?v=wJyiHsfJLEI>

Used **AAASummarize.app**

The YouTube video titled "The 'Mainframe Kid'" tells the story of Connor, a young man who has a passion for vintage computers. Here's a summary of the video:

- Connor started collecting vintage computers several years ago, bringing home old teletype machines and tape drives. His interest in understanding how things work led him to computers.
- Connor's collection includes a variety of items, such as an IBM PC XT in its original box. For a science fair in seventh or eighth grade, instead of a typical project like a volcano or plant growth, Connor built a hydrogen gas generator.
- When Connor moved into his current house, he negotiated to have the basement as his space and began filling it with vintage computer equipment. His most notable acquisition is an IBM Mainframe, which he saw in an ad and decided he wanted.
- Despite initial resistance from his parents, Connor managed to bring the massive Mainframe home. They had to use a chain fall to lower it into the basement. After setting it up and turning it on, Connor spent the next three months learning how to operate it.
- Connor's story started gaining attention when people found out that an 18-year-old had a full-size IBM Mainframe in his basement. He was invited to speak about his experience in Texas, and his presentation was uploaded to YouTube, where it quickly gained hundreds of thousands of views.
- Following his speech, IBM invited Connor for a tour of their Poughkeepsie plant, where the Mainframe was created. Connor, who knew a lot about the history of these machines, was surprised and excited. He now works at IBM.
- Connor's story is a testament to the potential of pursuing niche interests. Despite the perception that mainframes are a niche field, Connor points out that there are many job openings in the area. His passion for vintage computers, particularly IBM machines, led him to a job and a career path he loves.

Was this response better or worse? Better Worse Same X

Regenerate

Transitioning to Quantum-Safe Cryptography on IBM Z

Bill White
Didier Andre
Gregg Arquero
Ritu Bajaj
Joe Cronin
Anne Dames
Henrik Lyksborg
Alexandra Miranda
Maxwell Weiss



 Security

IBM Z



Redbooks

WO

<https://www.redbooks.ibm.com/redbooks/pdfs/sg248525.pdf>



Used AAASummarize.app

The document you provided is titled "Transitioning to Quantum-Safe Cryptography on IBM Z" and it's a comprehensive guide on how to transition to quantum-safe cryptography on IBM Z systems. Here are some key points from the highlighted pages:

- The document discusses the importance of cryptographic agility, which is the ability of an information security system to rapidly switch to alternative cryptographic primitives and algorithms without making significant changes to the system's infrastructure (Page 26, 37, 63).
- It introduces various use cases to illustrate the threats that many organizations face with the rise of quantum computing for use cases that are related to confidentiality, integrity, authentication, and nonrepudiation (Page 27, 38).
- The document provides an overview of the cryptographic components available on the IBM

Z platform

cryptograp

IBM Z (Pag

- It provides

policy repo

87, 94, 95, 9

- The docum

quantum-s

generate a

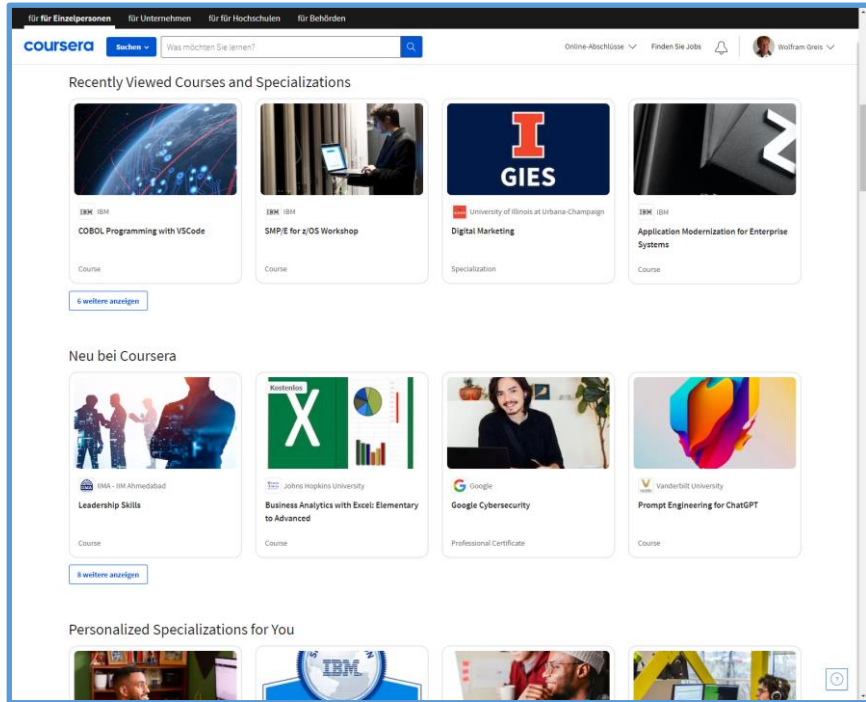
187, 188, 189, 190).

- It also provides a roadmap for scaling IBM quantum technology (Page 5).

Please note that this is a summary of the highlighted pages and may not cover all the details.

If you need a summary of a specific section, please provide the page range.

Please note that this is a summary of the highlighted pages and may not cover all the details. If you need a summary of a specific section, please provide the page range.



Used Coursera



Here are some COBOL courses available on Coursera:

1. **IBM Mainframe Developer:** This is a professional certificate program that takes three to six months to complete. It covers a range of topics including computer programming, software engineering, computer architecture, agile software development, and cryptography.
2. **COBOL Programming with VSCode:** This is a beginner-level course that takes one to four weeks to complete. It covers computer programming and other programming languages.
3. **IBM COBOL Basics:** This is a beginner-level course that takes one to four weeks to complete. It covers computer programming and other programming languages.
4. **IBM COBOL Software Development Practices:** This is a beginner-level course that takes one to three months to complete. It covers software engineering, computer programming, agile software development, and communication.
5. **IBM COBOL Core:** This is a beginner-level course that takes one to four weeks to complete. It covers computer programming and other programming languages.
6. **IBM COBOL Data and File Management:** This is a beginner-level course that takes one to three months to complete. It covers computer programming, databases, and SQL.
7. **IBM COBOL Software Development Process:** This is a beginner-level course that takes one to three months to complete. It covers computer programming, agile software development, and software engineering.
8. **IBM COBOL Basic Testing and Debugging:** This is a beginner-level course that takes one to three months to complete. It covers computer programming and other programming languages.

These courses should provide a comprehensive understanding of COBOL programming.



Regenerate

WOLFRAM CLOUD

Integrated Access to Computational Intelligence

The Wolfram Cloud combines a state-of-the-art notebook interface with the world's most productive programming language—scalable for programs from tiny to huge, with immediate access to a vast depth of built-in algorithms and knowledge. [Learn more >](#)

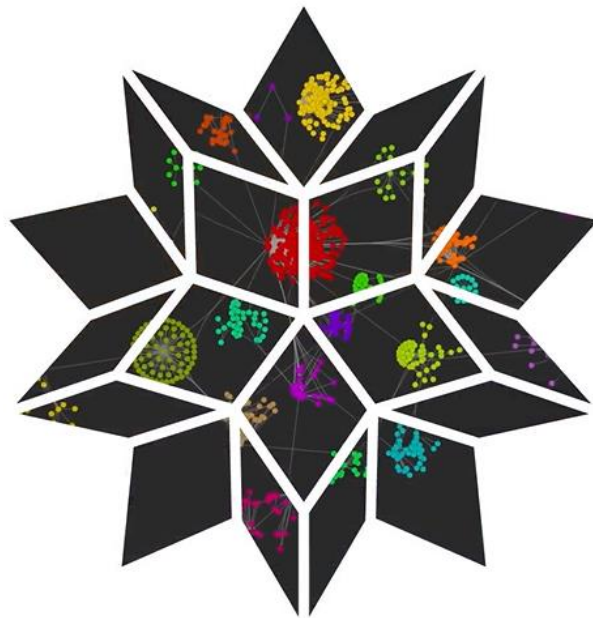
Wolfram Cloud technology powers Wolfram|One, Wolfram Mathematica, Wolfram Enterprise Private Cloud and Wolfram|Alpha, as well as Wolfram Instant APIs, Instant Web Apps and more...

BASIC PLAN

Sign up for free

HAVE AN ACCOUNT?

Sign in



WO

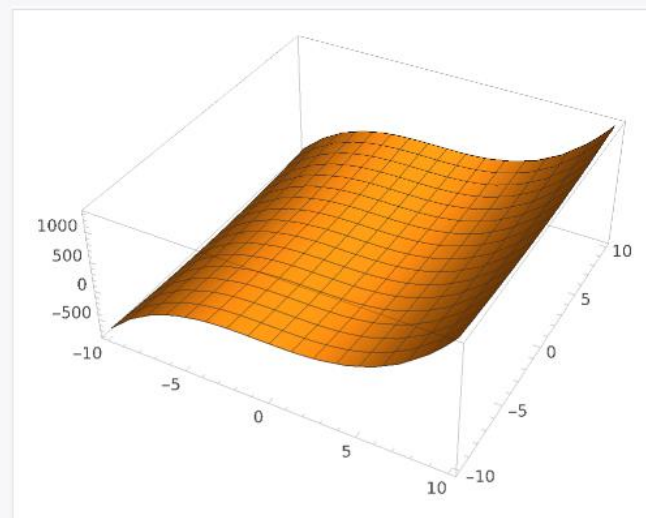
Plot the 3D graph for the equation $z=x^3+2x^2+3+y^2$



Used Wolfram



Here is the 3D plot for the equation $z = x^3 + 2x^2 + 3 + y^2$:



Regenerate

Send a message



VISLA

WO create a video were an ibm mainframe is educating students



Used Visla

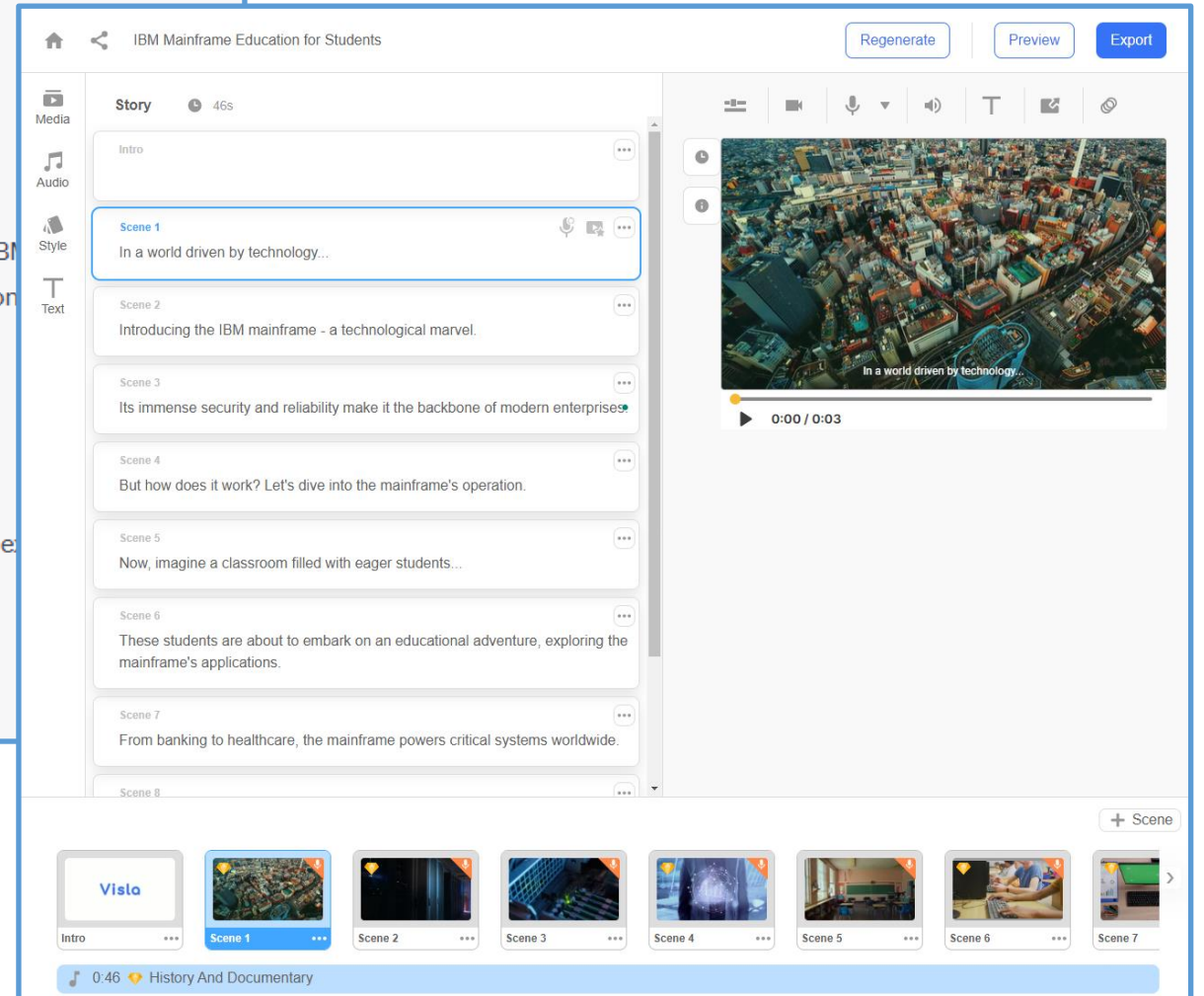
Your video has been successfully created! Here are the details:

- **Title:** IBM Mainframe Education for Students
- **Description:** A comprehensive guide for students to understand the workings of an IBM mainframe. This video aims to educate students about the importance and application of mainframes in today's digital world.
- **Tags:** IBM, Mainframe, Education, Students, Tutorial

You can view your video using this link: [IBM Mainframe Education for Students](#)

To save or edit your video, use this **claim code: 315950**. Please note that this code will expire after 24 hours.

 visla.us



The screenshot displays the Visla video editor interface for a video titled "IBM Mainframe Education for Students". The interface includes a top navigation bar with "Regenerate", "Preview", and "Export" buttons. On the left, a sidebar offers options for "Media", "Audio", "Style", and "Text". The main area shows a storyboard with eight scenes:

- Intro
- Scene 1: In a world driven by technology...
- Scene 2: Introducing the IBM mainframe - a technological marvel.
- Scene 3: Its immense security and reliability make it the backbone of modern enterprises...
- Scene 4: But how does it work? Let's dive into the mainframe's operation.
- Scene 5: Now, imagine a classroom filled with eager students...
- Scene 6: These students are about to embark on an educational adventure, exploring the mainframe's applications.
- Scene 7: From banking to healthcare, the mainframe powers critical systems worldwide.
- Scene 8

On the right, a video preview window shows a 3D cityscape with the text "In a world driven by technology..." overlaid. Below the preview is a progress bar indicating 0:00 / 0:03. At the bottom, a timeline shows the video's structure with thumbnails for each scene and a total duration of 0:46. The audio track is labeled "History And Documentary".

And the video can be published:

<https://app.visla.us/clip/1134970849225449472>

- <https://pugin.ai/>
- <https://www.whatplugin.ai/>
- <https://lyrai.app/>
- Pluginpedia von BLOGMOJO
<https://www.blogmojo.de/chatgpt-plugin/pluginpedia/>
- Chrome Extension
<https://chrome.google.com/webstore/detail/chatgpt-plugin-finder-%E6%90%9C%E7%B4%A2/mjekmollinipocojphojddkenddjeojh>

Weitere KI - Tools

Whitepaper Mainframe Transformation - Raus aus dem Nebel und rein in die Cloud

Passt in Ihrem Unternehmen die gesetzte Cloud-Strategie mit der Situation im Mainframe-Umfeld zusammen? Haupttreiber sind die Digitalisierung von Geschäftsprozessen, hoch flexible und skalierbare Anwendungsplattformen und der erforderliche Zugriff auf Daten. Nicht zu vergessen die dynamische Gestaltung der Applikationsentwicklungsprozesse und der zuverlässige Betrieb. Von Mainframe-Systemen sind viele andere Systeme abhängig. Trotzdem befinden sich Mainframe-Systeme und -Applikationen in einer kniffligen Lage. Lesen Sie in diesem Whitepaper alles zur aktuellen Themenstellung und Lösungsansätzen.



Übersetzen nach: **Englisch (US)** ▾

Does your company's cloud strategy match the situation in the mainframe environment? The main drivers are the digitization of business processes, highly flexible and scalable application platforms and the necessary access to data. Not to mention the dynamic design of application development processes and reliable operation. Many other systems depend on mainframe systems. Yet mainframe systems and applications find themselves in a tricky position. Read all about the current issue and possible solutions in this white paper.

Whitepaper Mainframe Transformation - Raus aus dem Nebel und rein in die Cloud

Passt in Ihrem Unternehmen die gesetzte Cloud-Strategie mit der Situation im Mainframe-Umfeld zusammen? Haupttreiber sind die Digitalisierung von Geschäftsprozessen, hoch flexible und skalierbare Anwendungsplattformen und der erforderliche Zugriff auf Daten. Nicht zu vergessen die dynamische Gestaltung der Applikationsentwicklungsprozesse und der zuverlässige Betrieb. Von Mainframe-Systemen sind viele andere Systeme abhängig. Trotzdem befinden sich Mainframe-Systeme und -Applikationen in einer kniffligen Lage. Lesen Sie in diesem Whitepaper alles zur aktuellen Themenstellung und Lösungsansätzen.



Übersetzen nach: **Chinesisch...** ▾


贵公司的云计算战略是否与大型机环境中的情况相匹配？主要驱动因素是业务流程的数字化、高度灵活和可扩展的应用平台以及必要的数据访问。更不用说应用程序开发流程的动态设计和可靠运行了。许多其他系统都依赖于大型主机系统。然而，大型机系统和应用程序的处境却十分棘手。阅读白皮书，了解有关当前问题和可能解决方案的所有信息。

[Auf DeepL.com anzeigen](#)

Wörterbuch



07735-9388668 info@mainframe-academy.de f y in



Home Ausbildungen

EUROPEAN MAINFRAME ACADEMY

Worldclass Mainframe Education

Ausbildungs-Übersicht

European Mainframe Academy

- European Mainframe Academy provides high-quality blended learning for IBM Mainframe education.
- Participants receive intensive support and guidance from recognized experts.

Blended Learning Concept

- EMA uses a mix of learning methods and formats to enhance learning outcomes.
- The effectiveness of this method has been proven.

Infothek

- Infothek is the library of EMA, offering in-depth information on Mainframe topics and news.
- It is a valuable resource for anyone interested in Mainframe.

Testimonials

- Participants highly recommend EMA workshops and seminars for technical knowledge and open discussions.
- The Mainframe for Executives workshop is particularly praised.

Start New Chat



The role of the teacher

10



24:11 / 1:21:12



Die erste Sitzung im Inverted Classroom

Christian Spannagel
117K subscribers

Subscribed

109



Share

Download

Clip



Summarize



44



Inverted Classroom Introduction and Survey Results

Chat with this summary

Expand Summary

- Most participants prefer to be on a first-name basis with the lecturer. 00:06
- Using first names in a learning atmosphere 02:51
- The first session introduces the topics covered, including mathematics, elementary arithmetic and algebra, number patterns, divisibility, prime factorization, systematic counting, elementary geometry, stochastics, and set theory. 07:44
- Learning requires active participation, not just observation. 10:18
- Inverted Classroom method involves self-study and group work. 15:06
- Inverted Classroom is a method that involves students completing preparatory tasks before attending a plenary event. 17:21
- Using face-to-face events for interaction and working together 21:15

ddb

Quack. I am CS50's duck debugger (ddb), an experimental AI for [rubberducking](#). Quack. My replies might not always be accurate, so always think critically and let me know if you think that I've erred. Conversations are logged for debugging's sake. Quack.

you

My code is not working as expected, any ideas?

```
x = input("Give me an integer x: ")
y = input("Give me an integer y: ")
sum = x + y
print("x + y is: " + sum)
```

ddb

It seems like you're trying to add two integers, but the `input()` function in Python returns a string. So, when you try to add `x` and `y`, you're actually concatenating two strings, not adding two integers.

To fix this, you can convert the inputs to integers using the `int()` function like so:

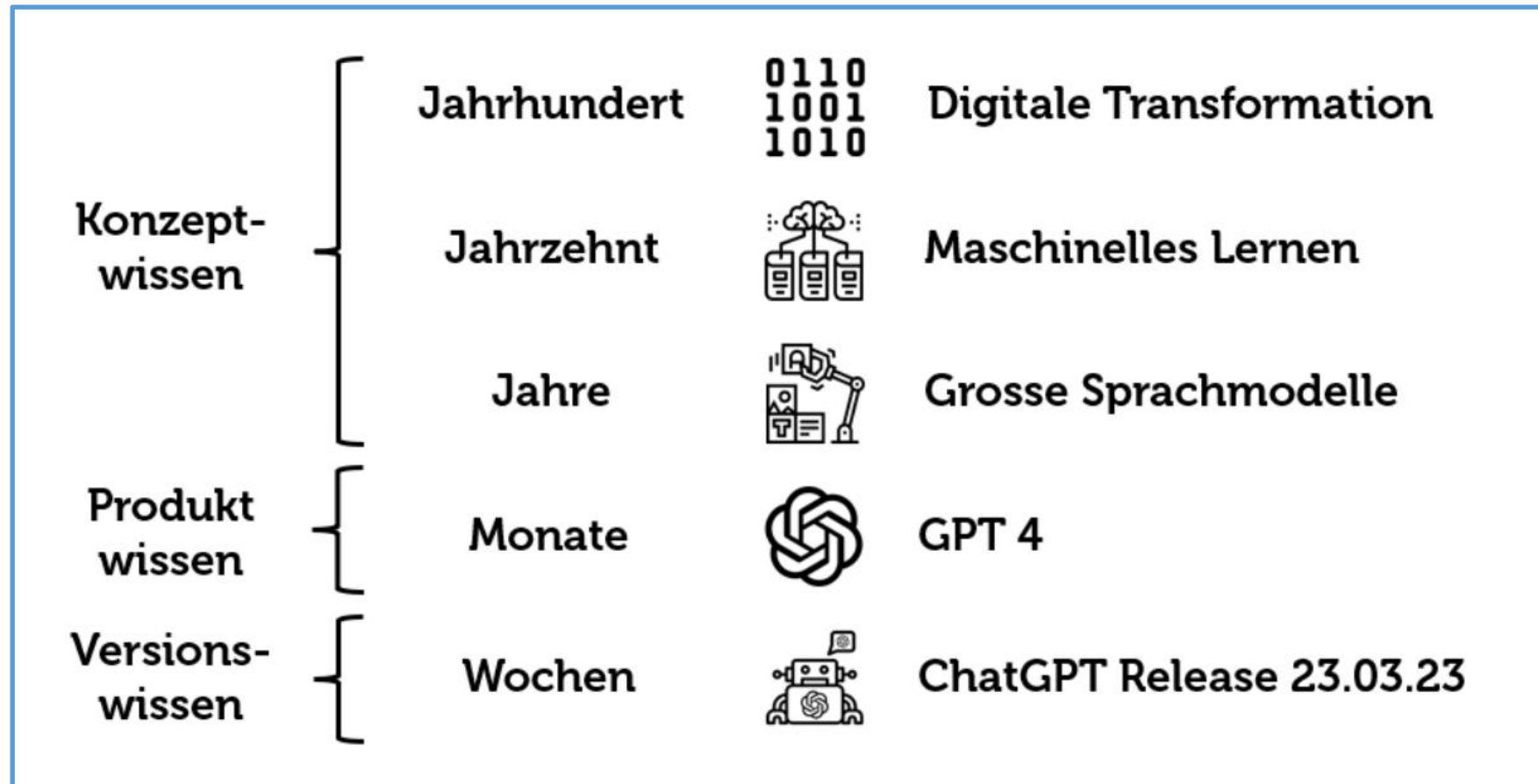
```
x = int(input("Give me an integer x: "))
y = int(input("Give me an integer y: "))
```

Additional Links and Resources



ZDF Heute Interview mit „Jenny“ und Christian Sievers (Mai 2023)





Source: <https://mia.phsz.ch/LLM/KonzeptwissenProduktwissen>

"Die Entwicklung der letzten 150 Jahren wird es in den nächsten 10 Jahren geben."



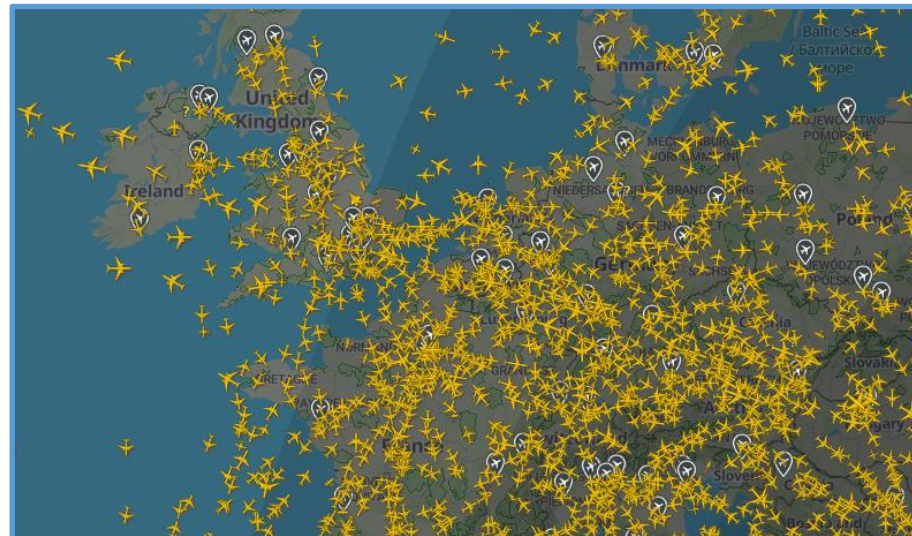
Sebastian Thrun in einem Interview in Wired 2012
https://www.wired.com/2012/03/ff_thrun/



Gebrüder Wright, erster Flug am 17. Dezember 1903
Foto: National Air and Space Museum



Chicago O'Hare International Airport



Flugradar live vom 20.8.2023 um 21.15

Für das BMBF ist klar: **KI ist eine Schlüsseltechnologie** und als solche **Ausgangspunkt für zahlreiche Entwicklungen, Innovationen und Produkte**. Sie birgt als breit einsetzbares Werkzeug enorme **Chancen für Wissenschaft, Wachstum, Wohlstand, Wettbewerbsfähigkeit** und gesellschaftlichen Mehrwert. Das BMBF betrachtet die Bereitstellung von KI-Werkzeugen, KI-Kompetenzen und KI-Infrastruktur als Teil der Grundversorgung. **Technologische Souveränität bei KI muss gesichert werden**. Deutschland und Europa sollen in einer Welt „**Powered by AI**“ eine Spitzenposition einnehmen. Hierfür will das BMBF die Rahmenbedingungen weiter verbessern.

Quelle:

https://www.bmbf.de/bmbf/de/forschung/digitale-wirtschaft-und-gesellschaft/kuenstliche-intelligenz/kuenstliche-intelligenz_node.html

- Die Forschungsbasis weiter konsequent stärken
- Eine Forschungsagenda für neue Perspektiven aufsetzen
- Die KI-Infrastruktur zielgerichtet ausbauen
- Erforschen und Gestalten von KI basierten Technologien im Bildungssystem
- Den Transfer von KI in Wachstum und wirtschaftliche Chancen forcieren
- KI im Bereich Gesundheit: gesellschaftlicher Nutzen für alle
- Den gesellschaftlichen und wissenschaftlichen Nutzen von KI gezielt erschließen
- Den europäischen und internationalen Schulterschluss noch stärker suchen
- Den gesellschaftlichen Dialog & die multidisziplinäre Forschung zu KI vorantreiben
- Eine passfähige, agile und innovationsfreundliche Regulierung beschließen

- Top 5 der beliebtesten Sprachtools:
 - Chat Interface von OpenAI [ChatGPT](#)
 - Unterhaltung mit fiktiven Personen: [character.ai](#)
 - Google [Bard](#)
 - plattformübergreifender Chatbot [Poe](#)
 - Texte schreiben und Hilfe bei Formulierungen mit [Quillbot](#)
- Top [50 GenAI Web Products](#)
- [z/OS Manual Search](#) by Living Mainframe
- [ARD KI-Podcast](#)

- Andrew Ng – The Near Future Of AI
<https://www.youtube.com/watch?v=KDBq0GqKpqA>
- CS50 Fall 2023 - Artificial Intelligence
<https://www.youtube.com/watch?v=0KmqnxXYJvA>
- CS50 Tech Talk – Large Language Models and the End of Programming
<https://www.youtube.com/watch?v=JhCl-GeT4jw>
- Sascha Lobo bei Markus Lanz
<https://www.youtube.com/watch?v=oyZ87y38zsl>
- The inside story of ChatGPTs astonishing potential
TED-Talk from OpenAI co-founder Greg Brockman
https://www.ted.com/talks/greg_brockman_the_inside_story_of_chatgpt_s_astonishing_potential



Questions? Remarks?

wolfram.greis@mainframe-academy.de