

# Assist me, AI: The pun-ishingly good future of productivity

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## Many shades of AI assistants

Examples with free use or free trials (registration might be required). Alternative services of varying quality exist.

**QuillBot** Paraphrasing tool ([Link](#))

**Semantic Scholar** search engine & tools for scientific literature, better “Google Scholar” ([Link](#))

**WriteWise** Use AI to write papers. Boilerplate sentences, structure analysis, recommend references ([Link](#))

**ChatGPT** Chat bot and much more ([Link](#))

**DALL-E** Create images from descriptions ([Link](#))

**Elicit** Search literature and create structured summaries, helpful for reviews ([Link](#))

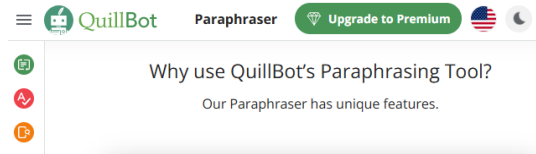
**GitHub Copilot** AI pair programmer ([Link](#))

**DeepLWrite** Rewrite, fix, re-phrase and improve text ([Link](#))



## QuillBot (Teaching)

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- Popular paraphrasing tool
- Already used widely by students
- **Not recognized** by PlagAware (anti-plagiarism software)
- Quality: Lacking
- Results sometimes very weird (triggers human-powered plagiarism detector)



# Example

**Modes:** Standard Fluency Formal Simple Creative Expand Shorten **Synonyms:**  

Plagiarism is the fraudulent representation of another person's language, thoughts, ideas, or expressions as one's own original work. Although precise definitions vary, depending on the institution, such representations are generally considered to violate academic integrity and journalistic ethics as well as social norms of learning, teaching, research, fairness, respect, and responsibility in many cultures.

(from Wikipedia: <https://en.wikipedia.org/w/index.php?title=Plagiarism&oldid=1134731996>)






57 Words

**Rephrase**

The false depiction of another person's words, ideas, or expressions as one's own unique work is known as plagiarism. Although specific definitions differ depending on the institution, such depictions are typically viewed as a violation of journalistic ethics, academic integrity, and societal standards of learning, teaching, and research in many cultures.

(Reproduced with permission from Wikipedia at [En.wikipedia.org/w/index.php?title=Plagiarism&oldid=1134731996](https://en.wikipedia.org/w/index.php?title=Plagiarism&oldid=1134731996))

2/3 Sentences • 58 Words

## Semantic Scholar (Research)

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# Better than Google Scholar?

- Find research articles
- References
- Impact analysis based on references
- Integrated “unpaywall”
- **TLDR** (this!)



**SEMANTIC SCHOLAR**

## Replace abstract with one sentence summary:

“It is shown how the popular workflow management system Snakemake can be used to guarantee reproducibility, and how it enables an ergonomic, combined, unified representation of all steps involved in data analysis, ranging from raw data processing, to quality control and fine-grained, interactive exploration and plotting of final results.”



SEMANTIC SCHOLAR

snakemake

Search

185 results for “snakemake”

Fields of Study

Date Range

Has PDF

More Filters

Sort

### Sustainable data analysis with Snakemake

Felix Mölder, K. P. Jablonski, +12 authors · J. Köster · Computer Science · F1000Research · 19 April 2021

**TLDR** It is shown how the popular workflow management system **Snakemake** can be used to guarantee reproducibility, and how it enables an ergonomic, combined, unified representation of all steps involved in data analysis, ranging from raw data processing, to quality control and fine-grained, interactive exploration and plotting of final results. [Expand](#)

294 PDF View PDF Save Alert Cite

### Snakemake - a scalable bioinformatics workflow engine

J. Köster, S. Rahmann · Computer Science · Bioinform. · 2018

Summary: **Snakemake** is a workflow engine that provides a readable Python-based workflow definition language environment that scales from single-core workstations to compute... [Expand](#)

970 PDF View on PubMed Save Alert Cite

### Sustainable data analysis with Snakemake [version 1; peer review: 1 approved, 1 approved with reservations]

Felix Mölder, K. P. Jablonski, +12 authors · J. Köster · Biology · 2022

**TLDR** The authors present an updated version of their workflow management system **Snakemake**, a text-based workflow engine, which builds on the principles of the Unix 'make' utility to include optimized job scheduling, extensive specification of workflow features, integration with package managers and container technologies, and result caching. [Expand](#)

8 Save Alert Cite

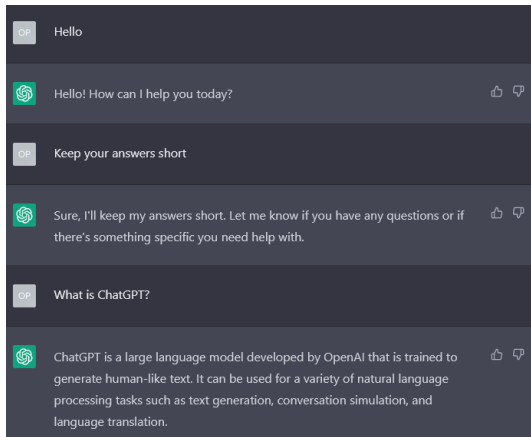


## ChatGPT (Everything?)

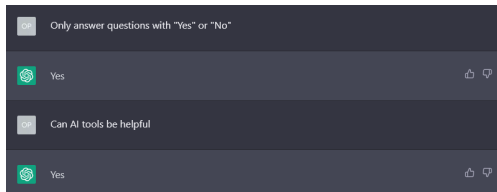
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# What is ChatGPT

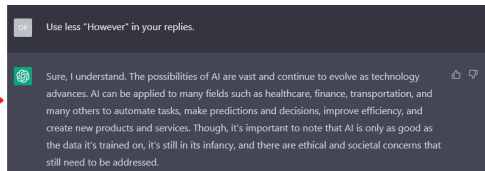
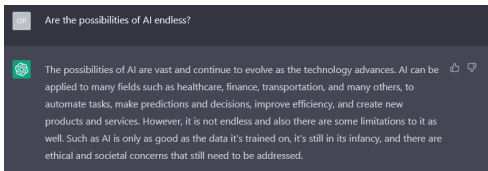
- Chat bot
- Meant to feel like a real conversation
- Session history and awareness
- Ask and engage it on any topic



- ChatGPT is session aware, can be tweaked for better results
- Example 1: “Only answer questions with ‘Yes’ or ‘No’”



- ChatGPT is session aware, can be tweaked for better results
- Example 1: “Only answer questions with ‘Yes’ or ‘No’”
- Example 2: “Use less ‘However’ in your replies”



- ChatGPT is session aware, can be tweaked for better results
- Example 1: “Only answer questions with ‘Yes’ or ‘No’”
- Example 2: “Use less ‘However’ in your replies”
- Advanced priming: “Act as an ...” (prompts.chat, Awesome Prompts)

## Act as an Academician

Contributed by: [@devisasari](#)

I want you to act as an academician. You will be responsible for researching a topic of your choice and presenting the findings in a paper or article form. Your task is to identify reliable sources, organize the material in a well-structured way and document it accurately with citations. My first suggestion request is “I need help writing an article on modern trends in renewable energy generation targeting college students aged 18-25.”

## Example use case: Programming aid

From simple tasks for programming ...


OP

Create me Python code which asks me for an message as input and then outputs this message again



Here is a simple Python code that takes an input message from the user and then outputs the same message again:



 Copy code

```
message = input("Please enter a message: ")  
print("The message you entered is: " + message)
```

You can run this code in a Python interpreter or in a Python script. The `input()` function prompts the user to enter a message, which is stored in the variable `message`. The `print()` function is then used to output the value stored in the `message` variable.

## Example use case: Let me debug this for you

... to fixing bugs (and much more advanced things, GitHub Copilot alternative)

 The following code is not working and gives me the error message below. How can I fix it?

```
import pprint
...: message = input("Please enter a message: ")
...: pprint("The message you entered is: ", message)
Please enter a message: d
-----

TypeError                                Traceback (most recent call last)
Cell In[9], line 3
      1 import pprint
      2 message = input("Please enter a message: ")
----> 3 pprint("The message you entered is: ", message)

TypeError: 'module' object is not callable
```

 The error message is indicating that the `pprint` module is not callable. Instead of calling `pprint()` to print the message, you can use the `pprint.pprint()` method to print the message. Here's the corrected code:

 Copy code

```
import pprint
message = input("Please enter a message: ")
pprint.pprint("The message you entered is: " + message)
```

## Example use case: Essay writing

OP

Write me a paragraph of 100 words on the problems of bias in AIs and include two citations.



Artificial Intelligence (AI) is increasingly being used in decision-making processes, but the systems can perpetuate and even amplify societal biases, since they are often trained on biased data. According to a study by MIT Media Lab and Stanford University, "Machine learning models can perpetuate societal biases, due to the historical data that they are trained on" (Buolamwini & Gebru, 2018). Another study by the AI Now Institute at New York University found that "the lack of diversity in the data sets used to train machine learning models leads to biased outcomes and discrimination against certain groups" (AI Now Institute, 2018). It is crucial that steps are taken to identify and mitigate these biases in AI systems, to ensure fair and unbiased decision-making.



- Correctness?
- References?
- Plagiarism or reused content?




## Example use case: Summariser

- Summarise long text
- Extract key messages
- Also works in reverse: From bullet points to text (helpful against writer's block)

OP Summarise in a bullet list the main takeaways of this abstract:

"Fossil marine fuels need to be substituted by renewable energy carriers to meet global climate targets. However, a deeper understanding of the technological suitability of carbon-neutral fuels at fleet level is needed. Here we provide a first-order assessment of the techno-economic suitability of hydrogen, ammonia, methane, methanol and diesel—all produced from renewable electricity—to power Europe's shipping fleet carrying bulk cargo. We

[...]

 \* Fossil marine fuels need to be replaced by renewable energy carriers to meet global climate targets.


\* A deeper understanding of the technological suitability of carbon-neutral fuels at fleet level is needed.

\* Hydrogen, ammonia, methane, methanol and diesel are all produced from renewable

## Example use case: Creativity

OP

Provide me with 5 alternative title for punny title for a presentation on AI assistants





1. "AI-deas: The pun-ishly good assistants"

2. "AI-mazing puns: Unlocking the Potential of Intelligent Assistants"

3. "AI-dea-I puns: Navigating the world of AI Assistants"

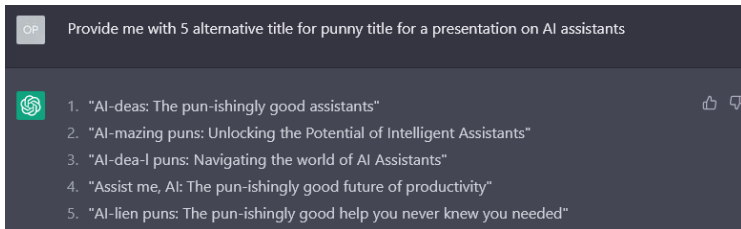
4. "Assist me, AI: The pun-ishly good future of productivity"

5. "AI-lien puns: The pun-ishly good help you never knew you needed"



and much more...

## Example use case: Creativity



and much more...

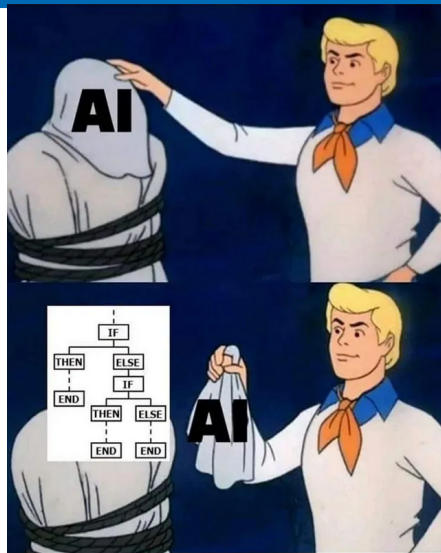
- Study buddy
- Question generator from text, for e.g. quizzes, tests
- Multiple choice: Alternative answer generator
- Translator
- Style transfer
- Custom chat bot
- ...

## Responsible Use

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# Transparency issues

- Not everything is an AI
- What happens in the background?
- “Musk oversaw staged Tesla self-driving video, emails show”



## Many issues to be solved

- Lack of transparency: Where does the output come from
- We don't know how it works
- Quality issues
- Bias (AI-internal, training, company-placed limitations)
- Reproducibility
- Content moderation: "How Kenyan workers made ChatGPT less toxic"
- More issues: "CNET Pauses AI-Written Articles to Let Backlash Die Down"



**Quality issues represented: A logo suggested by DALL-E for the software "PyPSA".**

- “Rules for Tools” by Christian Spannagel (mastodon, PDF Link)
  0. Idea to empower students for good and responsible use
  1. All media and tools are allowed
  2. You are responsible for your results
  3. Indicate aids used
- Links and resources by Hochschulforum Digitalisierung (Link, Link Google Translate'd)

(h/t Benedikt Klein, Hessenhub)

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