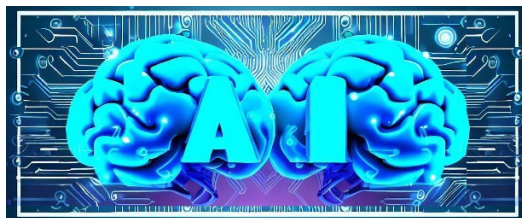




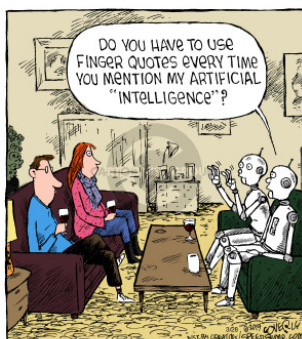
June 2023



Cyber Security Awareness Newsletter

Protecting yourself and information from cyber security threats.

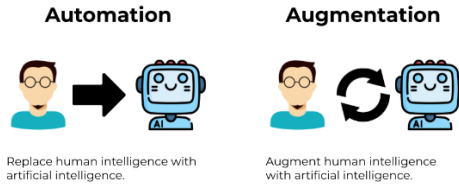
Artificial Intelligence chat/tools and image creators have become increasingly popular since their introduction. The three most popular are ChatGPT, released in June 2020, Bing Chat AI in March 2023, and Google Bard (which is as of this writing currently available in a sudo development phase). These AI tools are public AI tools and can also enhance productivity and aid in basic security measures. On the other hand, it can also be used to destroy productivity and compromise security as well as privacy. We have a duality of views here. This month, we will discuss AI misconceptions, how it can be used to improve productivity and address concerns for safeguarding our data.



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First off let's get some misconceptions out of the way:

It is going to take over my job. AI has the potential to automate many tasks that are currently performed by humans, leading to concerns about job displacement and unemployment. However, it is important to note that AI lacks creativity and other human interaction skills such as empathy, compassion, and emotional intelligence. Even though it is called artificial "intelligence," it is still just code - algorithms and logic - that gathers the "best possible outcomes" from a large dataset to present information to a user.

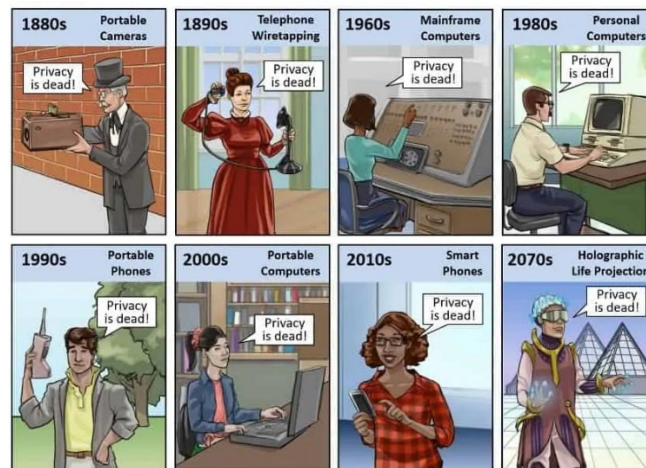


While AI can simulate emotions, history has shown that individuals most affected by a tool will typically integrate it into their job function. But no tool should ever be relied on 100%, as there is always a possibility of error, malfunction, or obsolescence. Tools are meant to enhance human capabilities, not replace them. It is important to have a critical and continuous learning attitude when using any tool.

AI will not be biased. AI models can amplify existing biases and discrimination in society, leading to unfair outcomes for certain groups. There is no dataset that will ever 100% satisfy every person. An example bias:

Example: <https://www.reuters.com/article/us-amazon-com-jobs-automation-insight/amazon-scrapes-secret-ai-recruiting-tool-that-showed-bias-against-women-idUSKCN1MK08G>

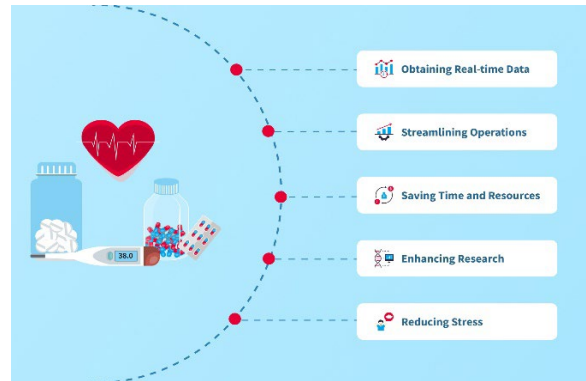
Autonomous decision-making. There are concerns about the use of AI for autonomous decision-making, including in high-stakes applications such as driving, healthcare, finance, and criminal justice. Those concerns surround accountability, transparency, and ethics. Examples: <https://www.pbs.org/newshour/nation/regulators-force-tesla-to-recall-363000-full-self-driving-vehicles>
<https://www.nytimes.com/2023/04/10/technology/ai-is-coming-for-lawyers-again.html>



Privacy and security: AI can be used to collect, analyze, and manipulate large amounts of personal data, leading to concerns about privacy and security. Large corporations already do this without AI, and AI does this more effectively for them. The major concern surrounding this is when AI is used for malicious purposes. On the other side of the coin, AI can also be used to thwart these just the same.



While there are several valid concerns regarding the use of AI, it is a powerful tool with legitimate uses when used in a responsible manner.



Answering questions: Searching the web to answer obscure questions can be time-consuming, sifting through multiple web pages with varying degrees of relevance. However, the emergence of AI chatbots has made this process much easier by providing specific answers to questions and allowing for follow-up questions to clarify understanding.

EM

In one sentence, what is a DNS polymerase?

DNA polymerase is an enzyme that catalyzes the synthesis of a complementary DNA strand by adding nucleotides in the 5' to 3' direction during DNA replication, repair, and recombination.

EM

where can I find it?

DNA polymerase can be found in various biological systems, including cells of organisms ranging from bacteria to humans. It is abundantly present in the nucleus of eukaryotic cells, where DNA replication occurs. In prokaryotes, DNA polymerase is found in the cytoplasm. Additionally, DNA polymerase can also be isolated and purified from various sources, such as bacteria, and used in laboratory settings for DNA amplification techniques like polymerase chain reaction (PCR).

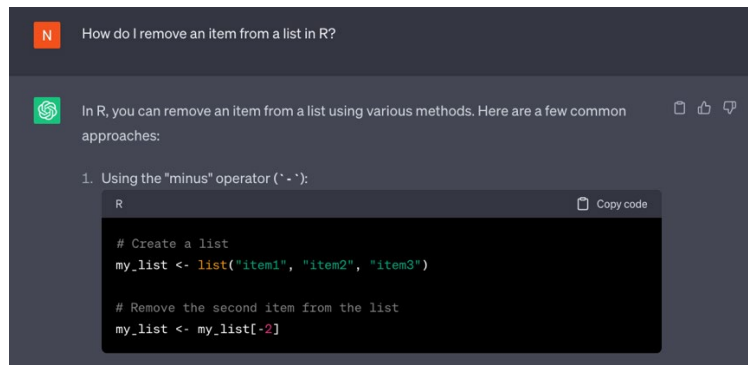
EM

In one sentence

DNA polymerase can be found in the nucleus of eukaryotic cells, in the cytoplasm of prokaryotic cells, and can be isolated from various sources for laboratory applications.

AI chatbots often give clearer responses than traditional search engines, but it is always important to check how accurate and up to date their information is.

Content Generation: AI is a powerful and helpful tool for various creative tasks. This can include creating templates, lists of tasks, generating ideas, rephrasing sentences, or providing a sample draft of an email. AI is very helpful in assisting your productivity for these tasks.



The screenshot shows a chat window with a dark background. At the top, a question is asked: "How do I remove an item from a list in R?". Below this, an AI response is provided, explaining that there are several methods and then listing the first one: using the "minus" operator. A code block is shown with R code to create a list and remove an element. The code is as follows:

```
R
# Create a list
my_list <- list("item1", "item2", "item3")

# Remove the second item from the list
my_list <- my_list[-2]
```

Programming Assistance: Fixing issues with code can be difficult. However, AI is very helpful with programming, since it can identify how to fix a specific error, explain what a specific function does, or provide code segments for tasks that are common yet difficult to solve. AI cannot create an entire program, but it is a powerful programming tool.

Using AI Safely



Following two simple rules will assist you in safely using AI.

No private data: Sensitive information such as PHI and RHI should not be put into public AI due to privacy concerns. Attackers can exploit AI systems to observe their behavior and uncover information that was previously used in them. For instance, in [2016](#) University of Washington researchers recovered the photos used to train AI to identify objects. These concerns are why many major companies have banned the use of AI, fearing leaks of confidential data.

Think before using: While AI has improved over time, it is far from perfect. While chat AI may be able to talk like a real person, it lacks full context, and can potentially give answers that are factually false. When using AI, always verify for accuracy.



The popularity of AI chat/tools and image creators, such as ChatGPT, Bing Chat AI, and Google Bard, has grown significantly in recent years. These tools offer opportunities to enhance productivity and address basic security measures, but they also carry risks of compromising productivity, security, and privacy. It is crucial to address misconceptions surrounding AI and recognize its role as a tool to augment human capabilities, while also ensuring responsible and critical use to unlock its benefits by safeguarding against biases, autonomous decision-making concerns, and privacy and security risks.