

Artificial Intelligence Best Practices

How to effectively and securely use AI tools

What is Artificial Intelligence?

Artificial Intelligence (AI) is a branch of computer science focused on creating systems that can perform tasks typically requiring human intelligence, such as learning, reasoning, problem-solving, understanding language, and recognizing patterns. By using algorithms and large datasets to simulate cognitive functions, AI can adapt to new information and make decisions with minimal human intervention. AI can be used to power and automate endless different technologies when used effectively. Large Language Models (LLMs), a subset of artificial intelligence, are transforming industries by enabling machines to understand and generate human-like language at scale, making it easier than ever for everyday people to utilize and harness AI's capabilities. But it's not just as simple as asking AI to complete a task, providing AI tools with clear direction and instruction is key, whilst also avoiding any inclusion of sensitive information.

To effectively leverage AI tools, it is important to have a foundational understanding of how AI works, including its risks and limitations. These technologies can provide valuable insights and efficiencies, but they also come with potential pitfalls.

How Can I Be Most Effective with AI

When using AI, especially Large Language Models (LLMs), it can be challenging to get the exact answer you're looking for with general or vague questions. It's important to remember that AI is not all-knowing; they rely on the clarity and specificity of your input to generate useful responses. To get the best results, start by providing context. For example, if you want a cybersecurity perspective, prompt the AI to "act as a senior cybersecurity analyst." This helps guide the model's reasoning. Next, be clear about the format you want—whether it's a bulleted list, a summary, or a step-by-step explanation you can direct the AI the specificity of your desired response. One of the strengths of LLMs is their ability to retain context throughout a conversation, allowing you to refine and iterate on responses until they meet your needs. After your initial prompt, you can always reference back to your previous inputs to the AI to guide and remind it of your specifications.

While AI is an extremely effective tool, it is not always a replacement. Large language models' responses are based solely on the data it is trained on, meaning it's not necessarily specialized. While AI can be viewed as a multi-tool, it is not necessarily equipped with the sharpened expertise that a professional in a specific field holds. General LLMs like ChatGPT, MS-Copilot, Claude, etc, do not have expert information and should only be used as a resource: not a definitive answer. When using answers from AI, always be sure to verify the information provided is accurate. Sometimes, AI can give you a false response with false references and citations, this is called a hallucination. To avoid hallucinations, you can use multiple LLMs to cross-examine the responses and achieve the most accurate result. Be sure to also do your own research apart from AI to confirm the validity of the information.

Practices to Avoid When Using AI

Be extremely vigilant about the data you share with any AI tool, only share the minimum amount of information necessary to achieve your desired outcome. Over sharing can increase the risk of data breaches and misuse.

- **Don't Over-rely on AI:** Since AI or LLMs are not always accurate, it is best not to over rely on its responses. Always do additional research to verify its responses.
- **Do not input personal or sensitive information:** AI models are trained on data input and human feedback given to the system. This means that the information users provide can resurface if prompted by the right questions. This poses a huge concern for any protected and confidential information. AI should not be used for sensitive information as this could lead to unintentional exposure of the data.
- **Don't use AI for legal advice:** While AI can provide resourceful information, it should not be used for legal advice. Please reach out to a human expert for more accurate and reliable information.
- **Do not make decisions solely based on AI:** AI is a very useful tool but it is limited to the information it is trained on. In order to make proper decisions, do not just listen to AI's recommendations but also consider other details.

In Summary:

While AI offers significant productivity benefits, users should be mindful of its limitations, verify its responses, and avoid over-reliance, especially for sensitive information or legal advice. Use AI as a complimentary tool to enhance, not replace, human expertise. Utilize AI to increase your productivity while being mindful of how much data you input into AI tools. Always strive to input the minimum amount of data necessary to complete your desired task and only avoid inputting sensitive data.

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