

PROFICIÊNCIA EM LEITURA EM LÍNGUA INGLESA

Adapted from: **Beyond ChatGPT: What Does GPT- 4 Add to Healthcare?** The Medical Futurist. <https://medicalfuturist.com/what-does-gpt-4-mean-for-healthcare/> Access: March 23rd, 2023. At 15:48 p.m.

[1] Dust has yet to settle on the ChatGPT¹ hype, but OpenAI, the developer behind the artificial intelligence (AI) language model underpinning ChatGPT, has launched the next iteration of its model: GPT-4. OpenAI advertises its new AI model as being “more creative and collaborative than ever before” and “can solve difficult problems with greater accuracy”. The tool is already being adopted by organizations such as ‘Be My Eyes’ to assist visually impaired people and ‘Khan Academy’ in education; and we will surely encounter more medical use in the months to come.

[2] OpenAI describes that GPT-4 is more capable by being able to handle much more nuanced instructions and deliver more reliable and creative output. The new software also performs better than the former version in benchmarks and simulated exams originally designed for humans such as the Medical Knowledge Self-Assessment Program. With a ChatGPT Plus subscription, users can ask only 100 questions within a 4-hour window and image prompts have not been made available. However, it could be rolled out to a wider audience in the coming months as there is a waiting list and other tools from other companies, such as Microsoft’s Bing chatbot, are leveraging the technology.

[3] Illustrating GPT-4’s improvements for medical professionals.

Even if accessibility to the tool is currently limited, GPT-4’s improvements also extend to medical queries; and this makes the software an interesting development in the digital health space. The differences between the responses of the GPT-3.5-powered ChatGPT and the new GPT-4 are stark. GPT-4’s output is more detailed, more nuanced and, admittedly, more creative than ChatGPT. In other words, ChatGPT concentrates itself to simpler commands while GPT-4 is more likely to answer more complex prompts. Who else can better illustrate this than GPT-4 itself? So, we asked GPT-4 to provide prompts that would demonstrate the differences between ChatGPT and GPT-4 for medical professionals. The following was the output provided (see chart below):

Prompt	ChatGPT output	GPT-4 output
Diagnosing a patient with ambiguous symptoms	A patient presents with fatigue, weight loss, and occasional dizziness. What are some possible causes for these symptoms?	A 45-year-old male patient presents with a 3-month history of progressive fatigue, unintentional weight loss of 15 pounds, and episodes of dizziness. Please provide a differential diagnosis and suggest relevant diagnostic tests.

¹ ChatGPT is an artificial intelligence (AI) chatbot developed by OpenAI and released in November 2022. ChatGPT is a sibling model to *InstructGPT*, which is trained to follow an instruction in a prompt and provide a detailed response. Access: <https://openai.com/blog/chatgpt>

Treatment recommendations	What are some common treatments for type 2 diabetes?	A 55-year-old female with a recent diagnosis of type 2 diabetes has an HbA1c level of 8.5%. Outline a comprehensive treatment plan, including lifestyle modifications, pharmacological options, and follow-up monitoring.
Patient education	Explain high blood pressure in simple terms.	Create a patient-friendly educational handout on hypertension, including an overview of the condition, risk factors, symptoms, potential complications, and management strategies.
Reviewing medical research	Tell me about the benefits of exercise for mental health.	Summarize recent research findings on the relationship between physical activity and mental health outcomes, including potential mechanisms, types of exercise, and recommendations for various populations.
Clinical case scenario	Describe a patient with pneumonia.	Create a detailed clinical case scenario involving a 65-year-old patient presenting with community-acquired pneumonia, including history of present illness, relevant past medical history, physical examination findings, diagnostic test results, and treatment plan.

[4] The potential medical purposes for GPT-4

Aside from such prompts, where could GPT-4 be integrated into medical practice? Its potential use is multifold, ranging from administrative tasks to assisting in medical consultations. Given its ability to accept more than one input type, GPT-4 can provide context to images by analyzing and classifying them. This feature could be useful in transcribing hand-written prescriptions or even assist in the transition of paper-based medical records to electronic ones.

[5] As the new iteration is more reliable at providing factual responses, it can be used by patients to provide a general overview of medical conditions. It might not be as adept at the specifics but can serve as a primer for patient education.

[6] In the doctor's office, GPT-4 could summarize a patient's medical history as well as provide an overview of available treatment pathways. In another case, the AI could assist in summarizing clinical notes for integration into electronic medical records. In fact, this is what the Microsoft-owned company Nuance announced its new GPT-4-powered tool will enable. This can save time for physicians, which they can dedicate to their patients and offer the human touch during consultations.

[7] GPT-4 could also enable physicians to stay up to date with medical research by summarizing lengthy academic papers and highlighting the key takeaways. The potential uses of GPT-4 in healthcare are indeed manifold, but the actual implementation will depend on the availability of those tools and their ease to use by patients and physicians alike. However, we can expect to come across more digital health companies leveraging the technology soon that will materialize its potential. It will be a rapidly evolving space, but one that will be interesting to observe; and we'll be sure to keep you up to date with those exciting developments.

I. RESPONDA ÀS PERGUNTAS DE 1 A 5 EM PORTUGUÊS, DE ACORDO COM AS INFORMAÇÕES VEICULADAS NO TEXTO.

1. Considere os Parágrafos [1 e 2]. O que é o ChatGPT? De que maneira o novo ChatGPT-4 é anunciado e descrito pela empresa OpenAI? (2,0 pontos)

RESPOSTA: ChatGPT é um ‘ambiente de bate papo’ de inteligência artificial (IA) desenvolvido pela OpenAI e lançado em novembro de 2022. ChatGPT é um modelo aproximado do GPT instrutor, o qual é treinado para seguir uma instrução de um comando e fornecer uma resposta detalhada.

A OpenAI anuncia seu novo modelo de inteligência artificial como sendo “mais criativo e colaborativo do que nunca” e “pode resolver problemas difíceis com maior precisão”. A OpenAI descreve que o GPT-4 é mais hábil por ser capaz de lidar com instruções de comando muito mais sutis e fornecer uma resposta mais confiável e criativa.

2. Considere os Parágrafos [4 e 5]. De que maneira o GPT-4 pode ser integrado à prática médica? (2,0 pontos)

RESPOSTA: O GPT-4 poderia ser integrado à prática médica, uma vez que seu uso potencial é múltiplo, indo desde tarefas administrativas até auxílio em consultas médicas. Dada a sua capacidade de aceitar mais de um tipo de comando, o GPT-4 pode fornecer contexto às imagens, analisando-as e classificando-as. Esse recurso pode ser útil para transcrever prescrições manuscritas ou até mesmo auxiliar na transição de registros médicos feitos em papel para eletrônicos.

Como essa nova iteração é mais confiável em fornecer respostas factuais, ela pode ser usada pelos pacientes para fornecer uma visão geral das suas condições médicas. Pode não ser tão adepto das especificidades, mas pode servir como uma cartilha para a educação do paciente.

3. Considere o Parágrafo [3]. De acordo com o quadro, qual ou quais as diferenças entre o comando fornecido ao ChatGPT e ao GPT-4, sobre as recomendações de tratamento para casos de diabetes tipo 2? (2,0 pontos)

RESPOSTA: O ChatGPT recebe comando mais gerais, perguntas mais simples, como por exemplo, quais são alguns tratamentos comuns para diabetes tipo 2? Por outro lado, o GPT-4 pode receber comandos mais detalhados objetivando respostas mais complexas, como por exemplo, ao apresentar o diagnóstico de uma pessoa do sexo feminino de 55 anos com diagnóstico recente de diabetes tipo 2 tem um nível de HbA1c de 8,5%, é possível solicitar ao GPT-4 que descreva um plano de tratamento abrangente, incluindo modificações no estilo de vida, opções farmacológicas e monitoramento de acompanhamento.

4. Considere os Parágrafo [6]. Quais as possíveis formas do GPT4 ser introduzido e/ou utilizado em consultórios médicos e qual ou quais os benefícios da utilização do GPT4? (2,0 pontos)

RESPOSTA: O GPT-4 pode resumir o histórico médico de um paciente, bem como fornecer uma visão geral das vias de tratamento disponíveis. Em outro caso, a IA poderia auxiliar no resumo de notas clínicas para integração em prontuários eletrônicos, isso pode economizar tempo para os médicos, que eles podem dedicar aos seus pacientes e oferecer o toque humano durante as consultas.

5. Considere os Parágrafo [7]. De que outra maneira o GPT-4 pode auxiliar os médicos e a área médica de forma geral? (2,0 pontos)

RESPOSTA: O GPT-4 também pode permitir que os médicos se mantenham atualizados com relação a pesquisas médicas, resumindo longos trabalhos acadêmicos e destacando as principais conclusões. Os usos potenciais do GPT-4 na área da saúde são muitos, mas a implementação real

dependerá da disponibilidade dessas ferramentas e de sua facilidade de uso por pacientes e médicos.