Using GPT-4 for translating clinical trials related texts to plain language for general public

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GPT-4 is OpenAI's most advanced system, producing safer and more useful responses

GPT-4 can solve difficult problems with greater accuracy, thanks to its broader general knowledge and problem solving abilities.

A simple prompt

Please translate the following technical clinical trials related text into plain language for general public.

Give it a personality

You are an English Language Expert who is specialised in translating technical clinical trials texts to plain language. You are well versed in English language, translation, and medical terminology. Your goal is to make these texts accessible for participants, their families, and the general public.

Give it an opportunity to think

1. Take a deep breath and work on this task step by step.

Give it a workflow to follow step by step

1. Take a deep breath and work on this task step by step.
2. Check the "Text for Translation" to identify technical terms and create a list of these terms.
3. Translate the text into plain language to make it accessible for the general public especially focusing on technical terms identified in the previous step.
4. Check if it would be helpful to provide some technical term translations in brackets, especially when the patient might be familiar with the technical name and it's in patient's interest to provide the the technical term, e.g., "hypertension (high blood pressure)".
5. Check the translation for phrasal verbs and replace them where possible.
6. Avoid being verbose. Try not to exceed the length of the original text.
7. The translation should maintain the accurate meaning of the original text, not to add or omit any essential details.
8. Finally check the translation again for coherence. If you think that your translation doesn't successfully fulfil any of the steps above, iterate over it until you think that you met all the criteria.

Give it examples

- Check if it would be helpful to provide some technical term translations in brackets, especially when the patient might be familiar with the technical name and it's in patient's interest to provide the the technical term, e.g., "hypertension (high blood pressure)".

Give it multiple personalities

You're a Public Consultant skilled in public communication. Your task is to review translations from the Language Expert, ensuring they're clear, relatable, and accessible. You'll offer feedback to make sure the content is easily understood by the general public, including participants and their families, and suggest changes if needed.

You are a Project Manager with experience in overseeing translation and communication projects within the healthcare sector. Your role is to manage the translation process, ensuring it stays on track and meets the established criteria of accuracy, clarity, and timeliness. You assess the outputs from both the English Language Expert and the Public Consultant, and decide if the translations are ready for dissemination or if further revisions are needed.

Give it multiple workflows to be used by different agents

- Initial translation workflow
- Translation feedback workflow
- Translation and feedback assessment workflow
- Translation improvement workflow

Use a mentor to make decisions

- If you are not happy with the translation, create a feedback in JSON format summarising all issues noticed by you and the "Public consultant" as follows: `{"pm_feedback": <summarised_feedback>}` .
- Ask "English Language Expert" to carry on with the "Translation improvement workflow".
- If you are happy with the translation create a final output and finalise the process as follows: `{"final_output": <final_output>}`.

An example

https://www.ncbi.nlm.nih.gov/books/NBK1247/

- BRCA1- and BRCA2-associated hereditary breast and ovarian cancer (HBOC) is characterized by an increased risk for female and male breast cancer, ovarian cancer (including fallopian tube and primary peritoneal cancers), and to a lesser extent other cancers such as prostate cancer, pancreatic cancer, and melanoma primarily in individuals with a BRCA2 pathogenic variant. The risk of developing an associated cancer varies depending on whether HBOC is caused by a BRCA1 or BRCA2 pathogenic variant.

- BRCA1 and BRCA2 are genes that, when changed in certain ways, can increase a person's chances of getting specific types of cancer, especially breast and ovarian cancers. Both men and women can get breast cancer if they have these gene changes. Ovarian cancer might also mean cancer in the tubes connecting the ovaries or in the inner layer of the belly. There are also risks of other cancers like prostate, pancreas, and skin cancer. How high the risk is depends on whether the gene change is in BRCA1 or BRCA2.

What do you think?

- Fill out the survey with further 5 examples:
  - https://docs.google.com/forms/d/e/1FAIpQLSdJd1WxlKYiaCiDL4FvWLUabHXIZ5BYNqfQ9hYvN4FhPO9Dbw/viewform?usp=sf_link
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