Board of Editors

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Dear Editors:

Issues like patient wait times, doctor shortages, and misdiagnoses plague modern healthcare. Could Artificial Intelligence offer real solutions to these problems? While AI innovations such as ChatGPT are more often associated with their role in producing fake news and academic dishonesty, the technology's potential in medicine raises new questions that are urged to be answered to solve our medical crisis.

I propose a 1000-word article titled: *Artificial Intelligence: Problem Solver or Causer in the Medical Field?* to explore how AI can reshape the patient-provider relationship in our modern era. I will translate research on Large Language Models (LLMs) such as OpenAI's ChatGPT and its use for medical advice to the audience of *Scientific American*, and at the same time explore the ethical concerns of replacing human judgement in the process of diagnosis and treatment. Key questions include: Can AI serve as reliable medical support? Would it advance medical support in a world that needs it, or introduce new risks instead?

Scientific American has done coverage of AI in the medical field before. In 2020, "How Artificial Intelligence Will Change Medicine" covered AI's usage in clinical trials. Additionally, in 2023, "Without Small Data, AI in Health Care Contributes to Disparities" explored the shortcomings of AI for underrepresented communities in healthcare. While these articles share similar aspects to my potential article, it is important to note that they focus on very specific subjects within the relationship between AI and medicine that do not overlap with the focuses of mine. The article I will write will focus much more on the patient-provider relationship.

I will cover this subject in a matter that ultimately makes sense for the readers of *Scientific American*. To inform the readers of my topics effectively, I will format it in the following manner: A brief introduction to how AI is being used by patients, questions brought up by its usage, the study and its findings, and how those results answer the questions.

I am a Computer Science major at University of Colorado, Boulder, and I study Artificial Intelligence related subjects daily. AI has very much become the "new frontier" of computer science, creating innovations in industries that often go unnoticed. I have done much research on these innovations, allowing me to be uniquely qualified to speak on its applications and implications on topics such as medical ethics. My goal is to bring this perspective to the editors and readers of Scientific American.