

Advanced AI Systems and Healthcare

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The world of artificial intelligence (AI) has gotten a lot of attention over the past few weeks. Top technology leaders and AI researchers have signed an open letter calling for a six-month moratorium on the development of advanced A.I. systems.¹ Elon Musk and Apple cofounder Steve Wozniak are among those who have signed the letter. The list of signatures is growing, with 18,970 signatures at the time of this writing.

One AI researcher has gone so far as to suggest with reference to the technology that we should “shut it all down” in an op-ed published by Time in response to the open letter.² And, governments are now looking at how to regulate AI, with Italy recently becoming the first Western country to ban ChatGPT, the popular AI chatbot.³

With all this concern being expressed, one might consider the realm of healthcare as an unlikely area of focus for AI technology. Marc Succi, a doctor at Massachusetts General Hospital who has conducted evaluations on how ChatGPT performs at diagnosing patients has warned that doctors should not be using the chatbot by itself to practice medicine.⁴

In spite of pushback, hospital records-keeping is one area that remains terribly outdated – a situation that presents risks and inefficiencies of its own. Some companies have been looking to AI chatbots as tools to reduce the paperwork burdens for physicians, and to enhance the patient-doctor relationship.

One such company is Glass Health, founded by Dereck Paul and Graham Ramsey in 2021. Initially offering an electronic system for keeping medical notes, Paul has since created and incorporated a program called “Glass AI”, based off of ChatGPT:

A doctor tells the Glass AI chatbot about a patient, and it can suggest a list of possible diagnoses and a treatment plan. Rather than working from the raw ChatGPT information base, the Glass AI system uses a virtual medical textbook written by humans as its main source of facts – something Paul says makes the system safer and more reliable.

"We're working on doctors being able to put in a one-liner, a patient summary, and for us to be able to generate the first draft of a clinical plan for that doctor," he says. "So what tests they would order and what treatments they would order."⁵

¹ 'Pause Giant AI Experiments: An Open Letter'. Future of Life Institute. March 22, 2023. Available at: <https://futureoflife.org/open-letter/pause-giant-ai-experiments/>. Accessed on April 9, 2023.

² Yudkowsky, Eliezer. 'Pausing AI Developments Isn't Enough. We Need to Shut it All Down'. Time. March 29, 2023. Available at: <https://time.com/6266923/ai-eliezer-yudkowsky-open-letter-not-enough/>. Accessed on April 9, 2023.

³ Browne, Ryan. 'Italy became the first Western country to ban ChatGPT. Here's what other countries are doing'. CNBC. April 4, 2023. Available at: <https://www.cnbc.com/2023/04/04/italy-has-banned-chatgpt-heres-what-other-countries-are-doing.html>. Accessed on April 9, 2023.

⁴ Brumfiel, Geoff. 'Doctors are drowning in paperwork. Some companies claim AI can help'. NPR. April 5, 2023. Available at: <https://www.npr.org/sections/health-shots/2023/04/05/1167993888/chatgpt-medicine-artificial-intelligence-healthcare>. Accessed on April 9, 2023.

⁵ *Ibid.*

To be sure, this is delicate time to be discussing advanced AI systems. Especially in the area of healthcare. But the application of AI in healthcare is not without precedent. In 2018, the Food and Drug Administration (FDA) approved an AI system to detect certain diabetes-related eye problems.⁶

Based on an AI precursor to current chatbot systems, the technology refers a patient to a specialist if it identifies a possible case of retinopathy. Other similar AI programs have been approved for specialties such as radiology and cardiology.

If the content utilized by AI can be controlled, regulated, and standardized, these technologies have been serving as successful tools to flag patients with indicators for certain diseases. Provided that these technologies are not relied upon in lieu of professional medical care by qualified and diligent human diagnosticians, they can offer a helping hand in a system that is otherwise rife with inefficiencies that can present dangers of their own.

The regulatory landscape in the field of healthcare may actually offer a roadmap for the application of AI systems in other areas – including those areas within the field of healthcare that may remain under less scrutiny. This is perhaps a time not only for governments and regulatory authorities to consider the impacts – including the risks and opportunities – of AI systems, but also for companies and professional associations across the board. But, outright bans? That seems a little heavy handed and, frankly, unrealistic.

⁶ 'FDA permits marketing of artificial intelligence-based device to detect certain diabetes-related eye problems'. U.S. Food and Drug Administration. April 11, 2018. Available at: <https://www.fda.gov/news-events/press-announcements/fda-permits-marketing-artificial-intelligence-based-device-detect-certain-diabetes-related-eye>. Accessed on April 9, 2023.