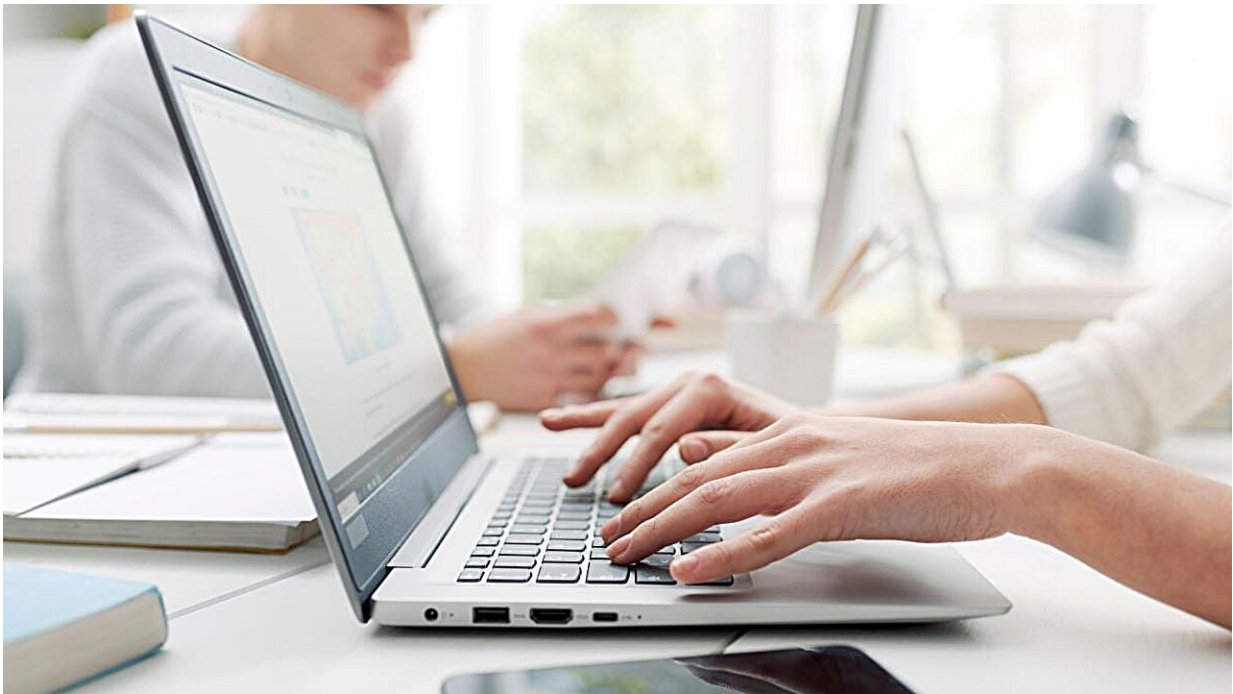


AI can identify guardian authorship of messages in teen patient portal

June 29 2024, by Elana Gotkine



Large language model (LLM)-based classifiers can accurately detect guardian authorship of messages sent from an adolescent patient portal, according to a research letter published online June 25 in *JAMA Network Open*.

April S. Liang, M.D., from the Stanford University School of Medicine

in Palo Alto, California, and colleagues examined the ability of a LLM to detect guardian [authorship](#) of messages originating from [adolescent](#) patient portals. Messages from adolescent patient [portal](#) accounts at Stanford Children's Health were sampled and manually reviewed for authorship. Two prompts were iteratively engineered on a random subset of 20 messages until perfect performance was achieved: one focusing on authorship identification (single task) and one that generated response to the message and identified authorship (multitask). Both prompts were tested on remaining messages.

Of the 2,088 test messages, 71.8 and 28.2 percent were labeled as parent- or guardian-authored and patient-authored, respectively. The researchers found that the single-task LLM achieved sensitivity and specificity of 98.1 and 88.4 percent, respectively, while the multitask LLM achieved sensitivity and specificity of 98.3 and 88.9 percent, respectively. This corresponded to a [positive predictive value](#) and negative predictive value above 95 percent for multitask LLM. Statistically identical performance was seen for the single-task and multitask classifiers.

"Ultimately, reliable identification of nonpatient-authored messages has implications beyond adolescent medicine. Among adults, care partners commonly access patient portals using the patient's credentials, especially relevant for geriatric patients or individuals with developmental differences," the authors write. "Our results found that this study's LLM has potential in improving safeguards for patient confidentiality."

One author disclosed ties to nference.

More information: April S. Liang et al, Using a Large Language Model to Identify Adolescent Patient Portal Account Access by Guardians, *JAMA Network Open* (2024). [DOI:](#)

[10.1001/jamanetworkopen.2024.18454](https://doi.org/10.1001/jamanetworkopen.2024.18454)

Copyright © 2024 [HealthDay](#). All rights reserved.

Citation: AI can identify guardian authorship of messages in teen patient portal (2024, June 29) retrieved 17 July 2024 from <https://medicalxpress.com/news/2024-06-ai-guardian-authorship-messages-teen.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.