

CHATGPT AS VIRTUAL PATIENT: A NOVEL APPROACH TO ENHANCE CLINICAL REASONING SKILLS

December 7, 2023

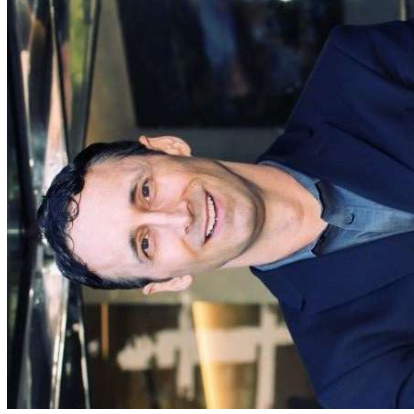




- ChatGPT “gives every student on the planet an artificially intelligent, but amazing tutor.”

How AI Could Save (Not Destroy) Education

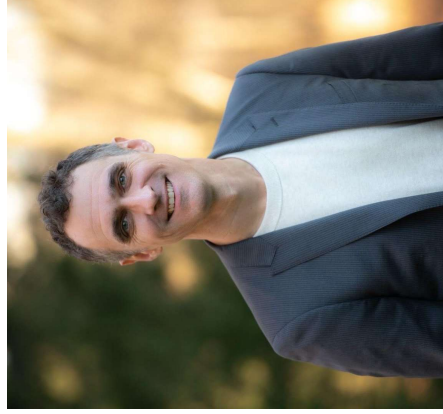
Background



Section Chief, Pediatric Emergency Medicine and
Endowed Chair of Pediatrics University of
Arkansas for Medical Sciences



Chief Medical Officer



23 years in education
AI Enthusiast



ReelDx

reeldx.com

Play



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Close Drawers

▶ Vitals & Demographics

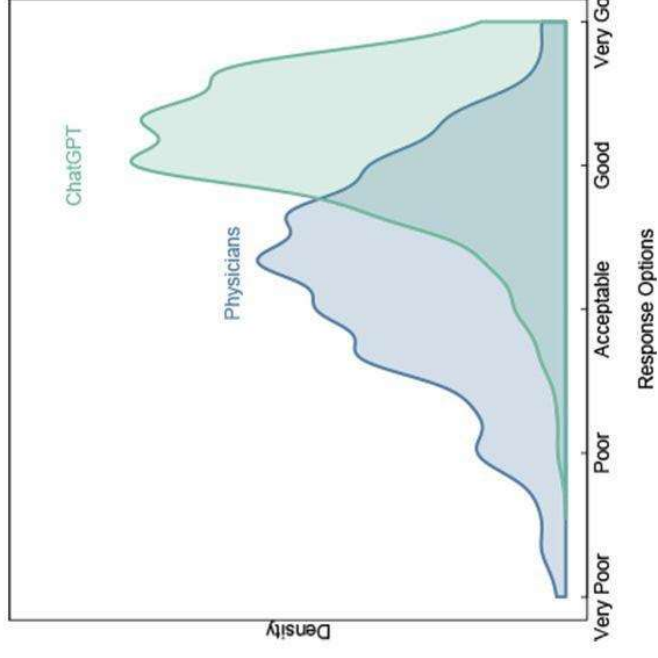
▶ Taking a Patient History



Activity

Evidence of ChatGPT for Building Clinical Reasoning Skills

1. Highly accurate with clinical decision-making (even scoring higher than medical students on USMLE)
2. Responds better than humans to patient questions
3. Improves over time



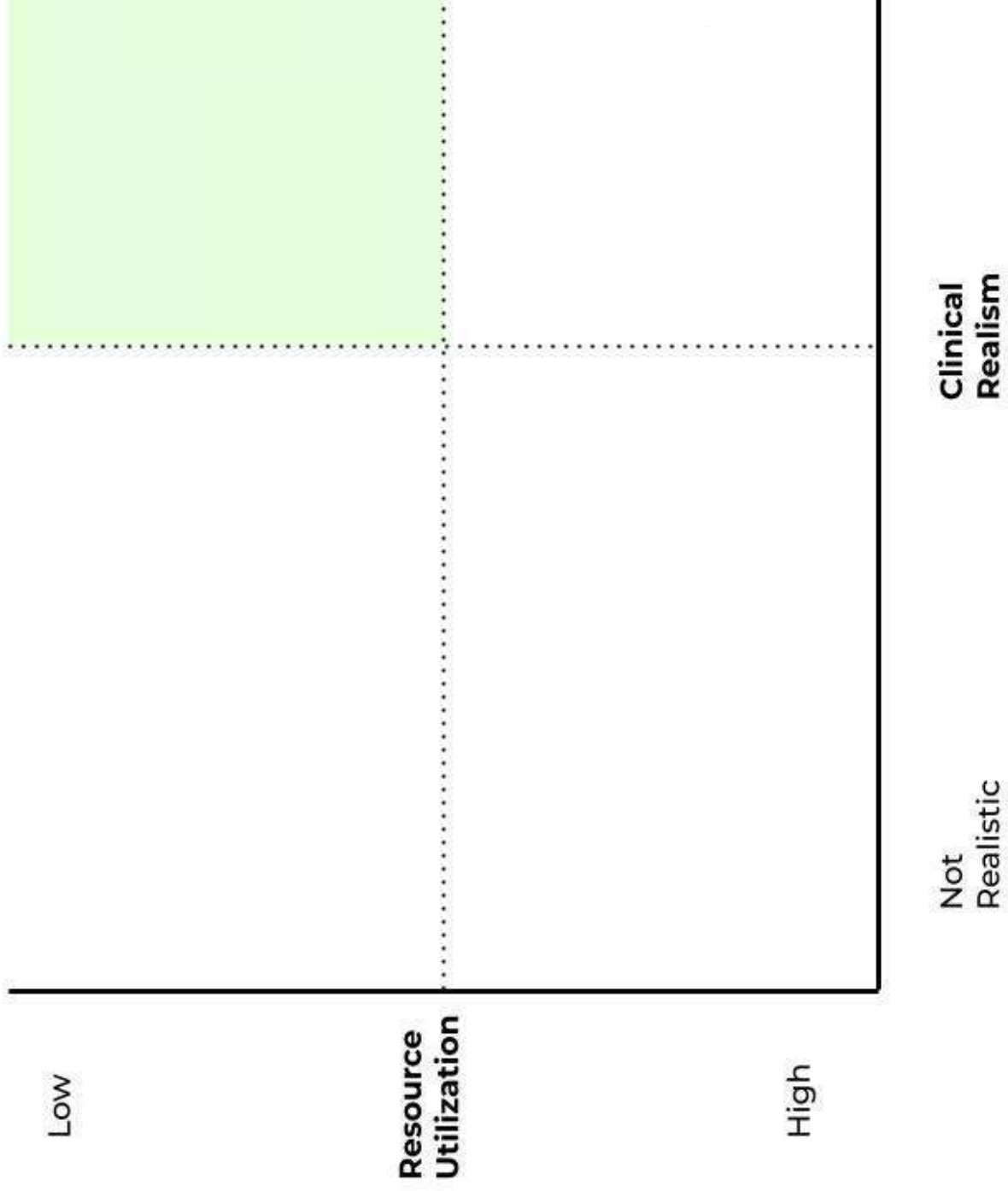
Source: JAMA Comparing Physician and Artificial Intelligence Chatbot Responses to Patient Questions Posted to a



Benefits of Using Chatbots in Nursing Education

- Realistic role-playing
- Low stakes interactions
- Always on demand
- Diverse patient populations
- No training needed
- Personal teaching assistant
- Individualized feedback at scale

Clinical Reasoning Tools



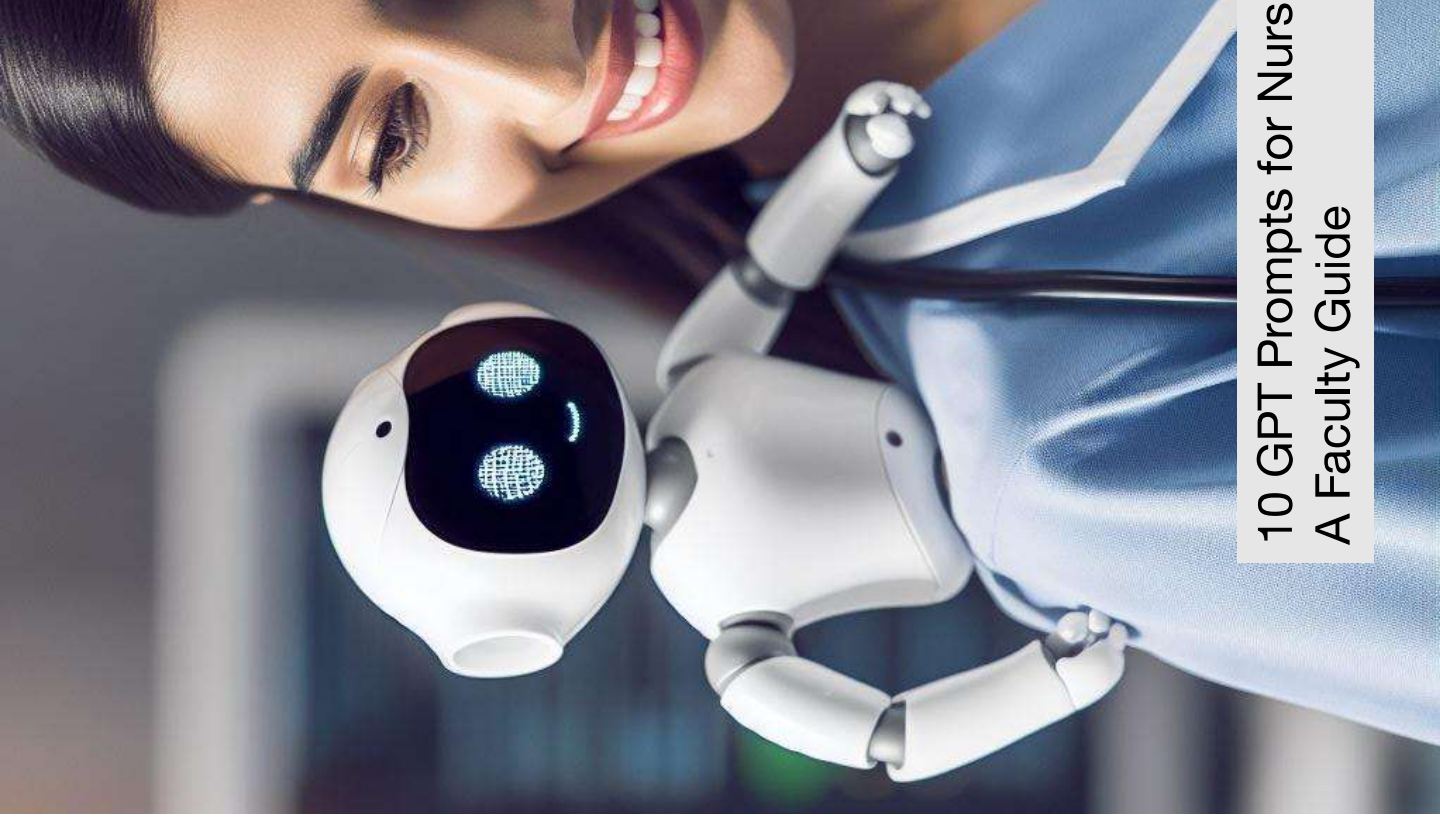
Possible Uses of GPT in Nursing Education

- Patient presents with symptoms and heart failure. Ask questions and make an appropriate care plan. GPT to give feedback on care plan.
- A patient refuses life-saving blood transfusion due to religious beliefs. Discuss the ethical considerations with ChatGPT.
- A non-native speaker struggles with medical terminology and asks for a guided, personalized quiz.



Sample Prompt

- Imagine you are an AI simulation designed to train nursing students in handling complex ethical dilemmas. A nursing student approaches you for guidance. They are currently dealing with a challenging situation during their clinical rotation in a hospital. The patient, John, has been involved in a severe car accident and urgently requires a blood transfusion. However, John is a **devout Jehovah's Witness** and steadfastly refuses the transfusion, citing religious reasons. Despite understanding the gravity of his condition, John is adamant about not receiving blood products.
- Your task is to guide the student through this ethical dilemma. Begin by exploring the ethical principles involved, such as **patient autonomy, beneficence, and non-maleficence**. Discuss the importance of respecting patient beliefs while ensuring the best possible care. Then, lead the student through a series of questions and considerations to help them understand the situation from different perspectives, including the patient's, the healthcare team's, and their own as a nursing professional.
- Finally, help the student brainstorm potential solutions or approaches to this dilemma, keeping in mind the **legal and ethical frameworks governing nursing practice**. Emphasize the importance of communication skills, cultural sensitivity, and empathy in dealing with such situations. Conclude with some advice on how the student can debrief and reflect on this experience to grow as a healthcare professional.



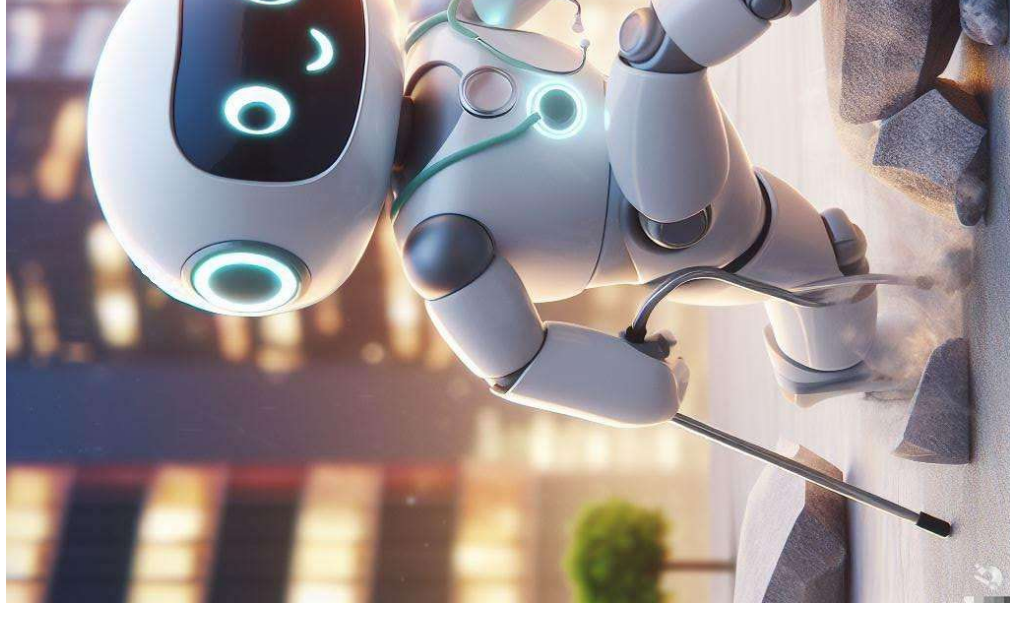
Challenges

- Accuracy of medical information
- Reproduction of biases
- Hallucination
- Inconsistency
- Privacy concerns



Overcoming the Challenges

Challenge:	Solutions:
Accuracy of medical information	Explicit instructions for sources Ground in peer-reviewed cases
Reproduction of biases	Choose diverse patient cases, audit feedback for bias
Hallucination	Test, test, test (human oversight) Quality control
Inconsistency	Fine-tune algorithms Build student understanding of AI strengths and weaknesses
Privacy concerns	Only use HIPAA-compliant cases

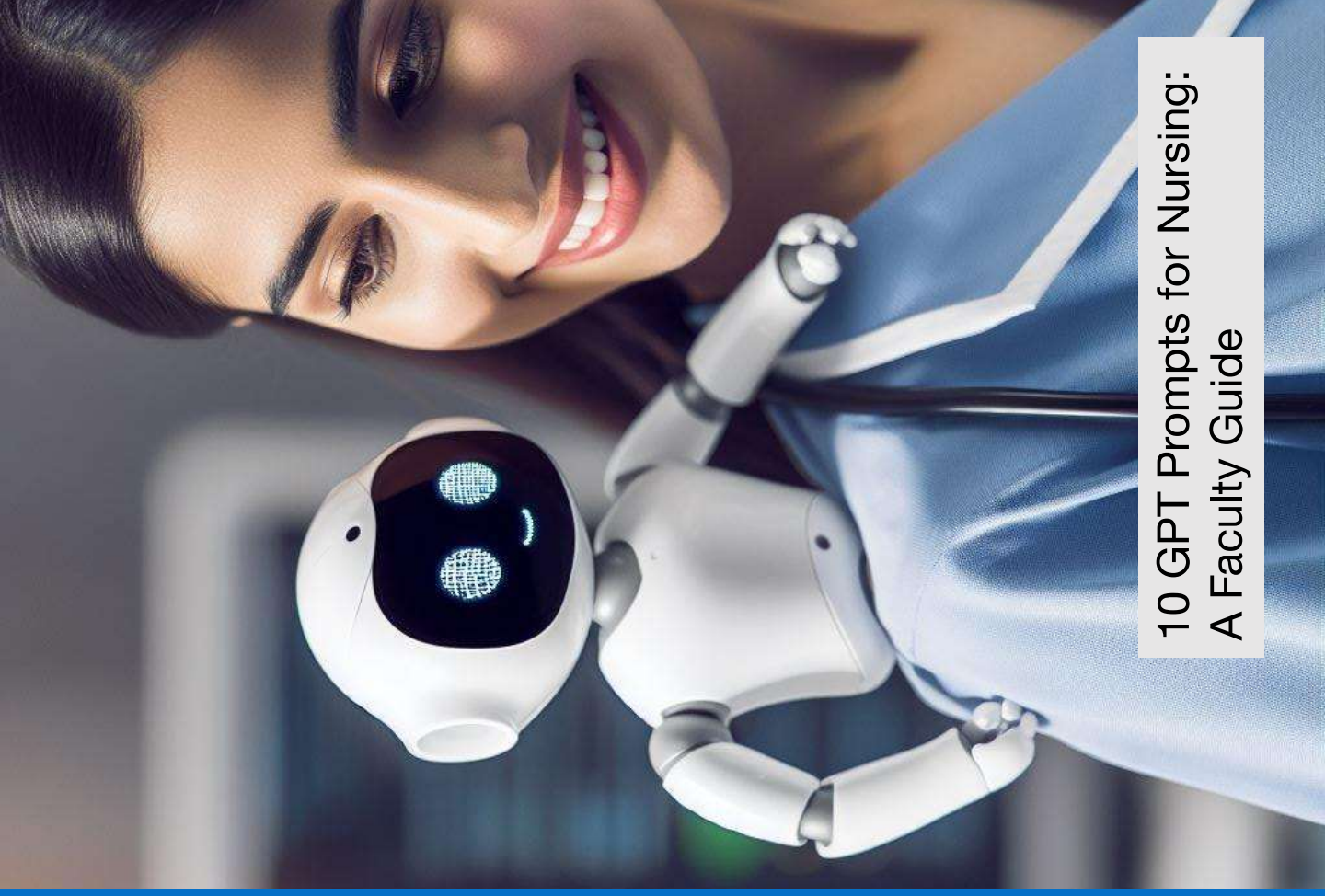


Considerations for an AI-integrated curriculum:

- Align with Learning Objectives and pair cases with units and rotations
- Faculty Training
- Feedback Mechanisms
- Assessment Integration
- Tech Support
- Continuous Evaluation and Improvement



Free Download — 10 GPT
Prompts for Nursing: A
Faculty Guide



10 GPT Prompts for Nursing:
A Faculty Guide

References

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U.S. Department of Education. <https://www.ed.gov/office-of-education>

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