

Sample Output

In this dialogue, I have demonstrated the ability for the physiobot to respond to user queries about physiotherapy related topics (i.e injuries, body pain etc.) I have also demonstrated the agent's default responses for when the agent does not understand the query. I demonstrated the agent's ability to recognize synonyms; for example, the agent responded similarly to the user's request for core/abdomen exercises. Sentiment analysis is briefly demonstrated when the user expresses annoyance, and the agent is able to pick out the sentiment and respond appropriately. By misspelling ankle, I demonstrated the agent's ability to recognize words or intentions despite spelling mistakes. The physiobot is able to match the word "tricep" to the entity "arm" and respond accurately. Near the end of the dialogue I tested the agent's ability to handle random queries or messages and it was able to respond reasonably.

I've also included two situations in which the agent's response is notable. The first being when the user expresses that they have a stabbing pain in their head. This interaction is more complicated and shows the agent's capacity for storing information from the user and responding to it. Another notable interaction is when the user wishes to book an appointment. The agent is able to communicate smoothly and ask for information that it is then able to hold in it's memory and reiterate to confirm the appointment.

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Physiobot

AC	Amelia Col	18:51
	hello	
P	Physiobot	18:51
	Hello! I'm Physiobot. I'm here to give you information on how to manage pain, injuries, and to assist you in scheduling appointments with a physiotherapist. How can I help you today?	
AC	Amelia Col	18:51
	I hurt my hand	
P	Physiobot	18:51
	How would you describe the pain?	
AC	Amelia Col	18:51
	a burn	
P	Physiobot	18:51
	Is this pain the result of a recent injury?	
AC	Amelia Col	18:52
	yes	
P	Physiobot	18:52
	There are many causes of pain in the hand. For a list of general	

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Physiobot

P	Physiobot	18:52
	There are many causes of pain in the hand. For a list of general symptoms and diagnoses here is a helpful link https://www.verywellhealth.com/hand-pain-causes-treatment-and-when-to-see-a-doctor-4178830 Is there anything else I can help you with today?	
AC	Amelia Col	18:52
	thank you. I also have pain in my elbow	
P	Physiobot	18:52
	Sorry, I didn't get that. Can you rephrase?	
AC	Amelia Col	18:52
	I have pain in my elbow	
P	Physiobot	18:52
	Is this pain the result of a recent injury?	
AC	Amelia Col	18:52
	no	
P	Physiobot	18:52
	There are many different sources of elbow pain. I've provided a list of symptoms and diagnoses here https://www.webmd.com/pain-	

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Physiobot

P **Physiobot** 18:52
There are many different sources of elbow pain. I've provided a list of symptoms and diagnoses here <https://www.webmd.com/pain-management/guide/elbow-pain> Is there anything else that I can help you with today?

AC **Amelia Col** 18:53
I have more pain

P **Physiobot** 18:53
Can you be more specific about where you're experiencing the pain?

AC **Amelia Col** 18:53
A stabbing pain in my head

P **Physiobot** 18:53
Is this pain the result of a recent injury?

AC **Amelia Col** 18:53
no

P **Physiobot** 18:53
Is the pain localized behind one of your eyes?

AC **Amelia Col** 18:53

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Physiobot

P **Physiobot** 18:53
Is the pain localized behind one of your eyes?

AC **Amelia Col** 18:53
yes

P **Physiobot** 18:53
Okay. Would you describe this pain as mild, moderate, or severe?

AC **Amelia Col** 18:53
moderate

P **Physiobot** 18:53
Headaches behind the eye might be a symptom of either a migraine, or a sinus headache. Would you like more information on both of these conditions?

AC **Amelia Col** 18:53
yes

P **Physiobot** 18:53
Sure thing. Here you go: <https://www.webmd.com/migraines-headaches/sinus-headaches> and [https://www.webmd.com/migraines-headaches-migraines](https://www.webmd.com/migraines-headaches/migraines-headaches-migraines). Is there anything else I can help you with?

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Physiobot

P **Physiobot** 18:53
Sure thing. Here you go: <https://www.webmd.com/migraines-headaches/sinus-headaches> and <https://www.webmd.com/migraines-headaches/migraines-headaches-migraines>. Is there anything else I can help you with?

AC **Amelia Col** 18:53
Thank you

P **Physiobot** 18:53
Anytime. That's what I'm here for.

AC **Amelia Col** 18:54
I want to exercise my abdomen

P **Physiobot** 18:54
Here is a chest workout for you! <https://www.goldsgym.com/blog/20-minute-chest-workout/> Is there anything else that I can help you with?

AC **Amelia Col** 18:54
I want to exercise my core

P **Physiobot** 18:54
If you want to strengthen your abdomen I recommend this list of exercises <https://www.coachmag.co.uk/exercises/abs-exercises> Is

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Physiobot

P **Physiobot** 18:54
If you want to strengthen your abdomen I recommend this list of exercises <https://www.coachmag.co.uk/exercises/abs-exercises> Is there anything else that I can help you with today?

AC **Amelia Col** 18:54
I would also like to order food

P **Physiobot** 18:54
One more time?

AC **Amelia Col** 18:54
Nevermind. I'm annoyed.

P **Physiobot** 18:54
Sorry, can you say that again?

AC **Amelia Col** 18:54
I'm annoyed

P **Physiobot** 18:54
I don't mean to. I'll ask my developers to make me less annoying.

AC **Amelia Col** 18:54
Okay

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Physiobot

AC	Amelia Col	18:54
	Okay	
P	Physiobot	18:54
	Great!	
AC	Amelia Col	18:55
	My anl hurt	
P	Physiobot	18:55
	Is this pain the result of a recent injury?	
AC	Amelia Col	18:55
	yes	
P	Physiobot	18:55
	Perform ankle ABC's. Is there anything else that I can help you with?	
AC	Amelia Col	18:56
	My arm hurts	
P	Physiobot	18:56
	Can you be more specific about where you're experiencing the pain?	

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Physiobot

P	Physiobot	18:56
	Can you be more specific about where you're experiencing the pain?	
AC	Amelia Col	18:56
	my tricep	
P	Physiobot	18:56
	Is this pain the result of a recent injury?	
AC	Amelia Col	18:56
	no	
P	Physiobot	18:56
	There are a few reasons why tricep pain occurs. Here is a list of potential diagnoses https://www.buoyhealth.com/learn/tricep-pain . Is there anything else that I can help you with?	
AC	Amelia Col	18:56
	Can I book an appointment?	
P	Physiobot	18:56
	Sure thing. I'll schedule a call-back. When would you like to be reached?	
AC	Amelia Col	18:57

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Physiobot

P	Physiobot	18:56
	Sure thing. I'll schedule a call-back. When would you like to be reached?	
AC	Amelia Col	18:57
	tonight at 8pm	
P	Physiobot	18:57
	Which phone number would you like to be reached at?	
AC	Amelia Col	18:57
	1234567	
P	Physiobot	18:57
	May I have your name?	
AC	Amelia Col	18:57
	Sara	
P	Physiobot	18:57
	Thank you, Sara. We'll contact you on tonight at 8pm at 1234567.	
AC	Amelia Col	18:57
	thanks!	

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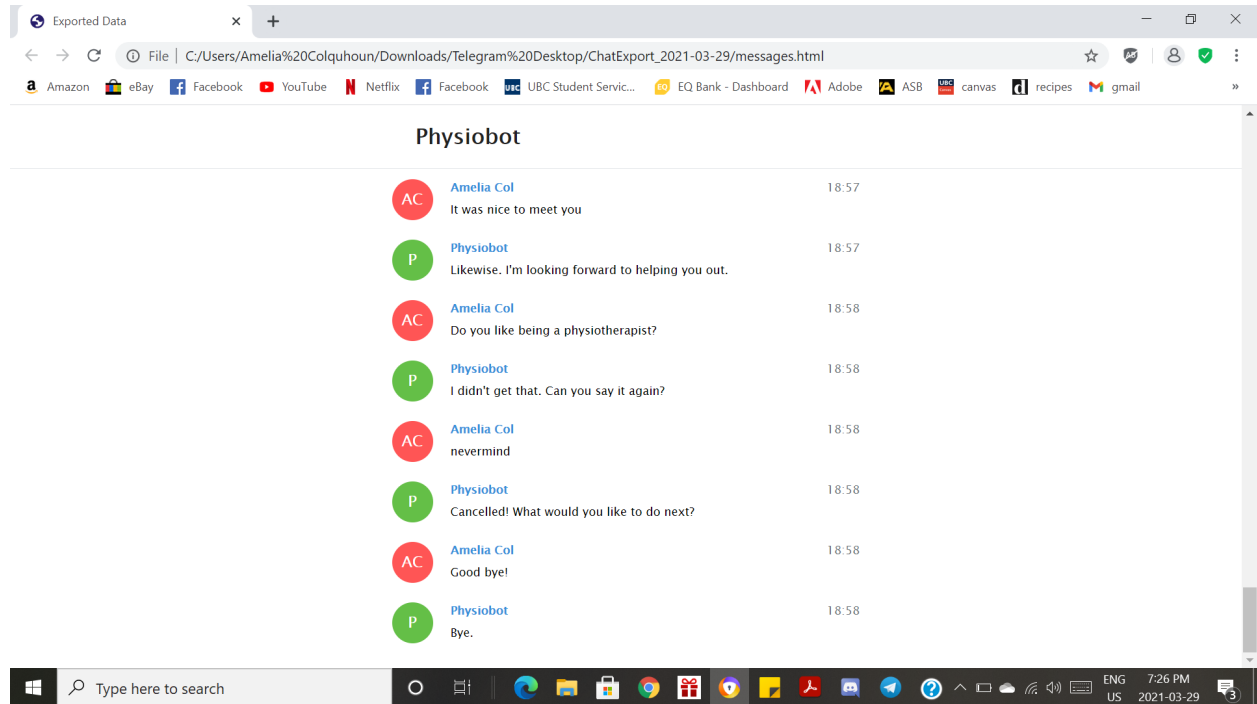
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Physiobot

AC	Amelia Col	18:57
	thanks!	
P	Physiobot	18:57
	It's my pleasure to help.	
AC	Amelia Col	18:57
	It was nice to meet you	
P	Physiobot	18:57
	Likewise. I'm looking forward to helping you out.	
AC	Amelia Col	18:58
	Do you like being a physiotherapist?	
P	Physiobot	18:58
	I didn't get that. Can you say it again?	
AC	Amelia Col	18:58
	nevermind	
P	Physiobot	18:58
	Cancelled! What would you like to do next?	

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Limitations

The agent has limited conversational skills and memory. It is unable to answer “follow-up” questions once it has given its advice to the user. It also has trouble when unnecessary words are added into the conversation, or if the user expresses more than one query in the same sentence/message. The agent also is not programmed to answer questions or messages outside of the topics of physiotherapy or exercise queries. The agent is able to recognize words despite spelling mistakes when the words are part of entities, however when the words are not part of entities, the agent has trouble recognizing words with spelling mistakes. Similarly for synonym recognition, not all synonyms are recognized, however most are.