From Students…
…to Professionals

Beta Presentation
Patient Training Tool

The Capstone Experience
Team Spectrum Health

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Project Overview

• User lists their symptoms to Google Home or Amazon Alexa
• Chatbot explains potential condition to user
• Chatbot recommends a Spectrum Health service
• User informs chatbot which service they utilize
• Service weights are adjusted for future recommendations
System Architecture

Google Home <-> Dialogflow <-> Amazon Alexa -> JavaScript -> SQL

Microsoft Azure

twilio
Condition Matching & Explanation

Alright. Let's get the test version of Patient Training Tool. Hello! I am the Patient Training Tool. Could you tell me some symptoms or a condition that you're experiencing?

I have ear pain and vertigo

It sounds like you're experiencing the following condition: earaches. Would you like me to explain earaches?

Yes please

An earache is a pain in the ear. Based on this condition, I recommend you visit the urgent care, but what service would you prefer to use?

I'll go to urgent care

I will take that into account. I hope you feel better soon. Would you like me to find the nearest Urgent Care?

No

Feel better soon
Patient Requests Link

Based on this condition, I recommend you visit the MedNow, but what service would you prefer to use?

I'll just do an eVisit, thanks.

I will take that into account. I hope you feel better soon. Would you like me to send you a link to eVisit?

Sure

Sure, I will send you a message. What is your phone number?

431-920-1032

You should receive a message shortly. Feel better soon.
Condition Rejection

Alright. Here's the test version of Patient Training Tool. Hello! I am the Patient Training Tool. Could you tell me some symptoms or a condition that you're experiencing?

1. I have redness and tears in both eyes
2. I need more symptoms in order to give an accurate diagnosis. Could you please list more if possible?
3. I have a slight blurring of vision too
4. It sounds like you're experiencing the following condition: pink eye. Would you like me to explain pink eye?
5. No thanks
6. Based on this condition, I recommend you visit the MedNow, but what service would you prefer to use?
7. I'll just do an eVisit, thanks.
8. I will take that into account. I hope you feel better soon. Would you like me to send you a link to eVisit?
9. Sure
10. Sure, I will send you a message. What is your phone number?
11. 431-920-1032
12. You should receive a message shortly. Feel better soon.
Alternative Diagnosis

Talk to Patient Training Tool

Sure, let's get the test version of Patient Training Tool. Hello! I am the Patient Training Tool. Could you tell me some symptoms or a condition that you're experiencing?

I am experiencing fatigue

I need more symptoms in order to give an accurate diagnosis. Could you please list more if possible?

No

You might be experiencing the following condition: shock. Would you like me to explain shock?

That is not possible

I understand. You may be experiencing the following condition: sinus problems. Based on this condition, I recommend you visit the MedNow, but what service would you prefer to use?

I will use MedNow

I will take that into account. I hope you feel better soon. Would you like me to send you a link to MedNow?

No thanks

Feel better soon
What’s left to do?

• Make bot sound more natural
• Add more training phrases to improve Natural Language Processing Model
• Improve launch time
• Add more synonyms for symptoms in order to recognize wider range of user inputs
Questions?