Alejandra Villa

MCOM 84 - Storytelling in the Age of Intelligent Machines
Project - Build a Chatbot. No coding required!
(100 points)
Bots can function in a variety of ways: they can disseminate, gather, and monitor information, and they can contribute to accountability or function as mechanisms for expressing critique and commentary in new ways, catalyzing new interactions. *It's important to underscore that these bots are not acting in any sort of artificially intelligent way, but are rather extensions of the intents and purposes of their human designers*. They are able to act autonomously in interactions with end-users because designers have taken the care to define and engineer the bounds of operation for them. (Diakopoulos, p.164)

A specific form of a bot, the chatbot, refers to a computer algorithm that engages humans in dialog using natural language and provides for a more conversational experience than would otherwise occur. Chatbots tend toward higher levels of social interaction. (Diakopoulos, p.148)

Choose an NLP/Chatbot Development Kit

Option #1: Watson Assistant
https://www.ibm.org/activities/watson-conversation
https://www.ibm.com/products/watson-assistant
https://www.ibm.com/products/watson-assistant/docs-resources

Option #2: Alexa
https://developer.amazon.com/en-US/alexa
https://developer.amazon.com/en-US/alexa/alexa-skills-kit
https://developer.amazon.com/en-US/docs/alexa/workshops/build-an-engaging-skill/get-started/index.html

Skill Invocation Name: Radio Music Sorter/Radio Song Recommender
Alexa Skills Kit (ASK)
Project Charter/Plan

1. **General Project Information**
   a. Radio Song Recommender

      This Alexa Tool is called Radio Song Recommender,' which will give the public the opportunity to share their top songs with radio stations.
      My Skill ID: Amzn1.ask.skill.a502d853-8f73-4b24-8287-88b2343ef0c8
      Github:
      https://github.com/villa2022/Alexa-Skill-Radio-Song-Recommender.git

Test:
https://developer.amazon.com/alexa/console/ask/test/amzn1.ask.skill.a502d853-8f73-4b24-8287-88b2343ef0c8/development/en_US/
Instructions
First type/say 'open radio song recommender'
After saying hello and Alexa will say "Hello World! What song would you like to recommend to radio stations?
And you type/say your song recommendation. Then Alexa skill will take note of songs.

b. **Impact of the project**

This skill will help radio stations sort the music being played. Radio stations will no longer have songs being repeated more than once in an hour. These skills will give listeners to recommend songs to the station, so they have a list of songs that the public wants to listen to. The songs the stations are playing will be more relevant to the public's preference and up-to-date. Radio stations will present music the public is interested in.

2. Project Team (N/A)
   a. Project Manager
   b. Team members
3. **Stakeholders** (significant interest in or those impacted by the project)
   a. Who is the audience?

The audience is radio listeners, including all age groups. In specific, those radio listeners complain that the songs are being repeated more than once an hour. Now they can use this Alexa tool, "Music Recommender," to share their top songs, and later on, the list is shared with the relevant radio stations that play that genre of music.

4. **Project Scope Statement**
   a. **Project Purpose** / Business Justification (what is the business need?)

Radio stations play the music that the public is interested in, not which music label pays more for their artist to be played. The Alexa tool will then take note of a list of songs that an individual is listening to and then shared it with the local radio station. If radio stations play the songs that the public wants to hear that will increase the number of listeners leading to an increase in their overall business.

b. **Objectives** (what problem are you solving, what are you trying to achieve?)

- Reduce the songs being repeated more than once on radio stations.
- Have a variety of music play on radio stations.
- Play songs that the public recommends/enjoys listening to.

- Allow the public to have a say in what music they want to listen to on the radio.
- Increase the number of people listening to the radio.

c. **Deliverables** (list of high-level products to be delivered)

i. Interaction model, GitHub demo, etc.

Social Media - Music Apps - Music Labels - Radio Station = Music will be based on the public's interest = an increase in radio listeners.

Having these groups all work together can increase the number of radio listeners.

Including the public's opinion on what radio stations should play will encourage them to listen to the radio, since they are listening to their desired music taste.

Radio Stations considering Public Music Recommendations

d. **Scope** (what is included and excluded in the project)

- Exclude
  - Music label groups pay the stations to play their artist/specific songs.
  - Independent artists that pay the stations to play their music.
- Include
  - Public's opinion on music choice
  - App Music Listener list of top songs/artists

e. **Milestones** (start and end dates for project phases)

Start April 9, 2022 - End April 30, 2022

f. **Risks and Assumptions** (what obstacles may cause the project to fail?)

Music labels sue radio stations because they are not accepting their money to play their artists.

5. **Communication Strategy** (how will this be communicated)

Music labels groups should communicate with the public about which artists/songs are actually popular and people desire to hear. They can use social media to know what song is going viral. Also, they can use music applications like Apple Music or Spotify to see the public's most played songs and then shared them with radio stations. Once the radio stations are aware of the top songs being played on the music applications their music being played can influence an increase in radio listeners.

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Metrics for Success

Objectives and Key Results (OKRs) are an efficient way to evaluate the viability of new efforts and can be established at the individual, team, and newsroom levels. This approach is enabling the Newsmaker to feel ownership of the strategic direction of the company as if she were the CEO of a start-up. The idea of the "journalist as an entrepreneur" is so important these days that journalism schools are emphasizing courses and training in product development and business planning. (Marconi, Francesco)

Accuracy, Speed, Scale, Integration, Price Performance (Marconi, 2.3)

Information to Include When Documenting AI Projects for the Newsroom
(Marconi, 2.1)

1. **Overview**: What AI system is being used and what are its attributes? (Watson or Alexa?)
    a. Ease of use, Cost, Functionality? Why did you choose it?

The AI system being used is Alexa Skills Kit (ASK). The attributes for ASK include a key and a value. The key is enforced as a "String" type and the value is an unbounded "Object." While doing the developer console module they mentioned that the text between the 'single quotes' is called a string, but can also be put within "double quotes." In Module 4 of Building an Alexa skill, they inform us about backticks (`) used to share the key with the tilde. This defines a special kind of string; a template string. "Template strings can have embedded variables and handle multiple lines, and they don't conflict with either type of quotation mark." In other words, you can use them to present a long string in a more human-readable way in your code.
https://developer.amazon.com/en-US/docs/alexa/workshops/build-an-engaging-skill/collect-slots/step1.html

The attributes scopes include request, session, and persistent attributes. "For session and persistent attributes, you must ensure that value types are serializable so they can be properly stored for subsequent retrieval." In other words, for those sessions, you have to make sure the value types are published or arranged in regular installments or series in order to correctly store them and succeed when obtaining material stored in a computer system. This only applies to session and persistent attributes because the request is not persistent outside of the request processing lifecycle.

https://developer.amazon.com/en-US/docs/alexa/alexa-skills-kit-sdk-for-nodejs/manage-attributes.html

2. **Methodology**: Why was this particular NLP chatbot chosen?

Alexa developer console - Alexa Presentation Language (APL)

I chose the Alexa developer because I am more aware of how the Alexa tool works and I have one at home. In specific, I chose this ALP chatbot because it involved using an "invocation" phase meaning it's the name Alexa uses to identify the skill you are requesting. When I would use the Alexa tool I always wanted to be able to share my top songs with the local radio stations, so later on I would enjoy listening to them on the radio. With the APL people will be able to ask and listen to their desired music. Then, the list of their top played music will be shared on radio stations, where they can see the updated popular songs.

3. **Process**: What steps were taken to ensure editorial quality and accurate results?

When making a code I had to make sure to save and deploy it before testing it. I had to make sure the tone used in the script for Alexa was both friendly and casual. I had to make possible statements "Hey Alexa, play [name of song]" Hey Alex, play music from [artist/group]." The list of music recommendations will then be organized from most to least plays. Later on, the list that includes what people ask Alexa to play will be placed will be shared with radio stations, so they know what is trending.

4. **Edge Cases:** What potential errors were flagged with the data?
    a. Where are the weaknesses?

If the skill was not working or it was getting some kind of syntax error, I used the code sample of (javascript or python). I then copy and paste the code and go to the Code tab in the Alexa developer console. Also when making the greeting I had to make sure I was copying and pasting on the correct line. When testing the skill I had to be precise with what the user will say avoiding any spelling errors.

I found it difficult to add a YesIntent handler with very simple content. In specific when it asked me to copy the lines of code that define LaunchRequestHandler and paste it a couple of lines after the original LaunchRequestHandler definition, but before the beginning of the HelloWorldIntentHandler.

SUBMITTED APRIL 7

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Alexa Skills Kit (ASK)

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Project Scope Statement

Radio stations play the music that the public is interested in, not regarding those music labels paying for their artist to be played. The Alexa skill will then take note of a list of songs that an individual is listening to or asks Alexa to play and then shared it with the local radio stations. If radio stations play the songs that the public wants to hear that will increase the number of listeners leading to an increase in their overall business.

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