

ORACLE

Strategies for building an intelligent FAQ digital assistant

Program agenda

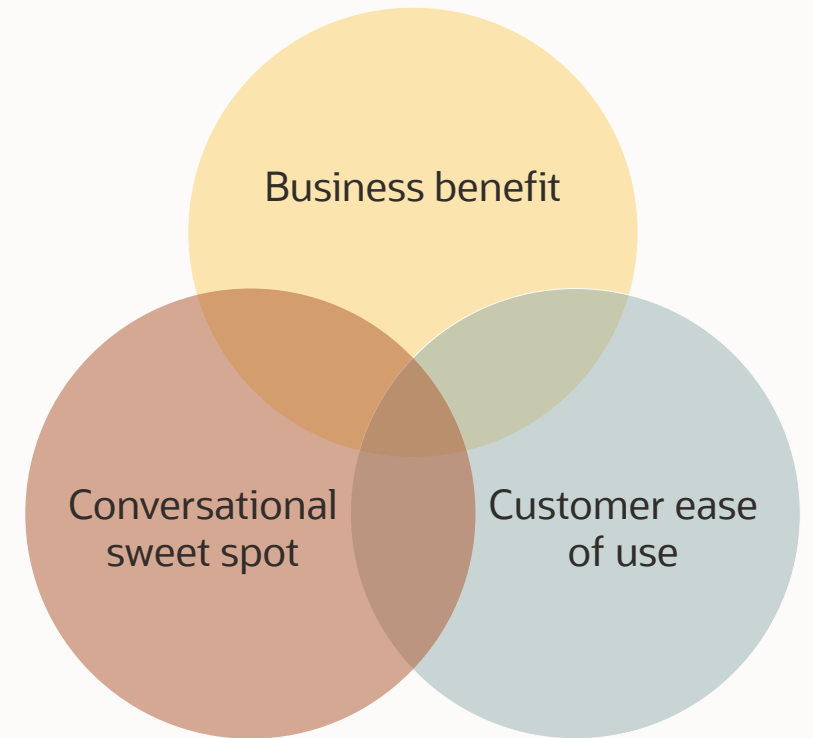
- 1 Why FAQs are a great use case for digital assistants
- 2 The long tail problem
- 3 Strategies to design a great FAQ digital assistant
- 4 Other tactics to consider

Program agenda

- 1 **Why FAQs are a great use case for digital assistants**
- 2 The long tail problem
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Why FAQs are a great use case for digital assistants

- Customer ease of use
 - No need to search a page or document
 - Search using natural language (user terms) and not business terms
- FAQ fit in a conversational sweet spot
 - There are many ways people can express their question
 - They may not know the exact terminology to use or may have an implied question
 - NLP will extract the user intent
- All of the above benefits the business
 - Increases customer satisfaction
 - Improves the user experience



Program agenda

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- 2 **The long tail problem**
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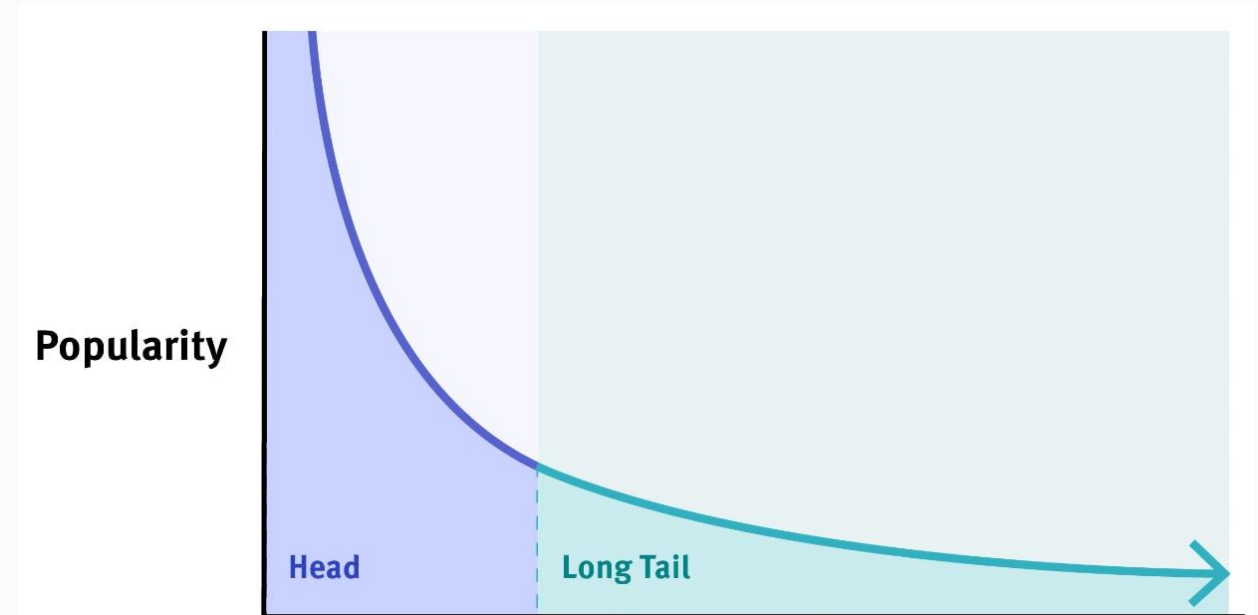
The long tail problem

Popular intents (head) provide good economies of scale

- High-impact / Mainstream
- The “few” which are asked the “most”
- Scalable

Long tail intents are “many” which are asked the “least”

- Low-impact / Many
- Niche
- Deal with using different strategies



The long tail problem

” Why can't I just build a digital assistant to answer all questions?

There is effort to build each and every intent

Each intent needs to be trained with 80-90 quality utterances

Ideally you would curate answers to be more conversational

Potentially a maintenance headache

Balancing information within the digital assistant vs “single source of truth” outside

How frequently does information change?

Program agenda

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Strategies to build a great FAQ digital assistant

The common architecture

Design to reduce the likelihood of saying you didn't understand. Makes your DA look much smarter using:

Answer intents

- Reduces implementation effort
- Bring in related answers if relevant

Knowledge Search

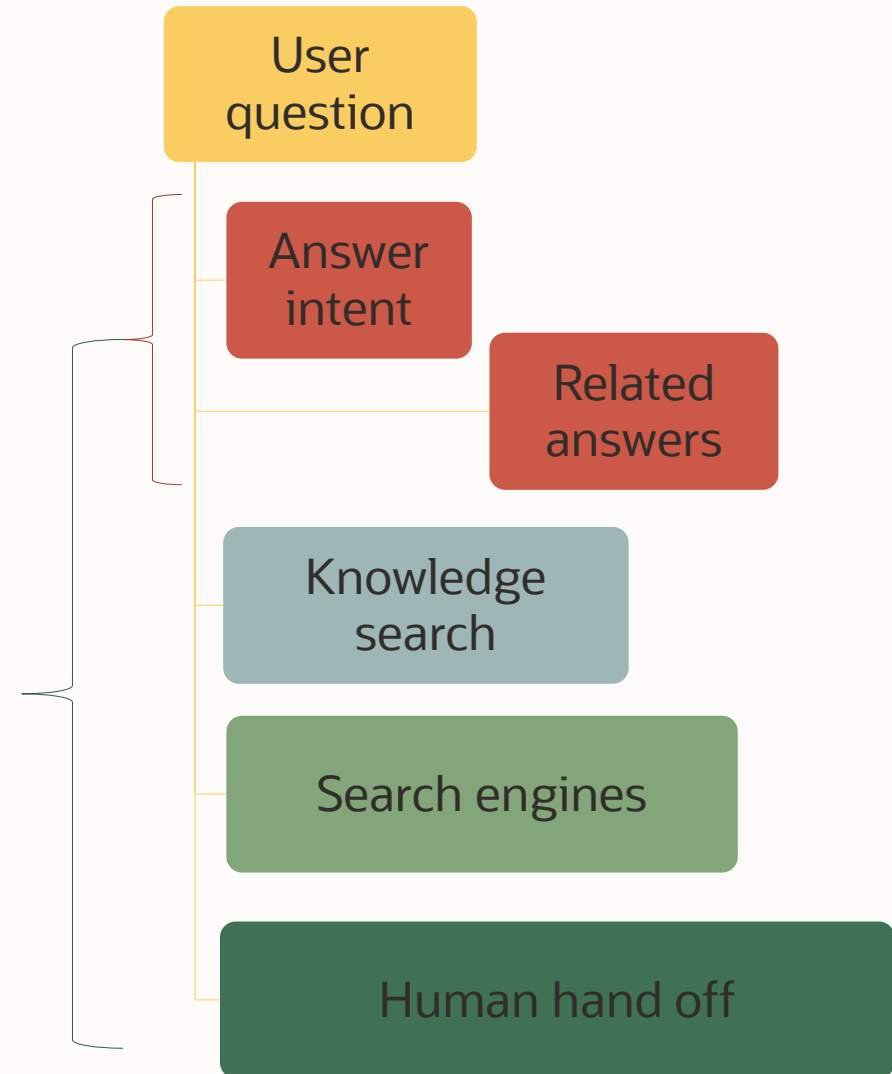
- In-domain knowledge with very little effort.

Search engines with backend integration

- Search intelligently in open domains, some effort

Handover to human agent

- Ultimate way of getting users unstuck, little effort



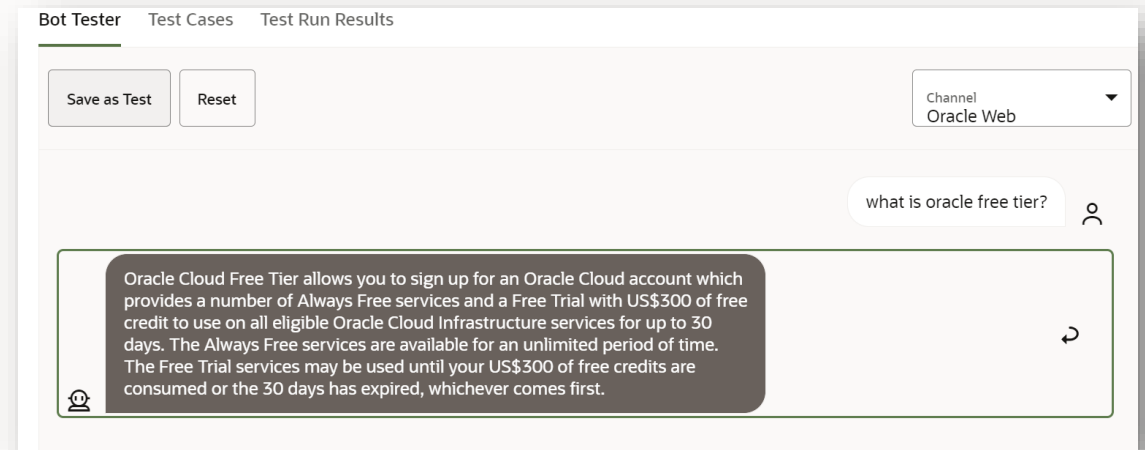
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Answer intents display pre-defined answers without using any dialog flow

Strategies to build a great FAQ digital assistant

Answer intents

- Answer intents use utterances to train the NLP model to resolve and display a pre-defined answer
- Answers are saved in resource bundles, allowing multilingual FAQs to be created
- No dialog flow is needed to handle frequently asked questions in a conversation



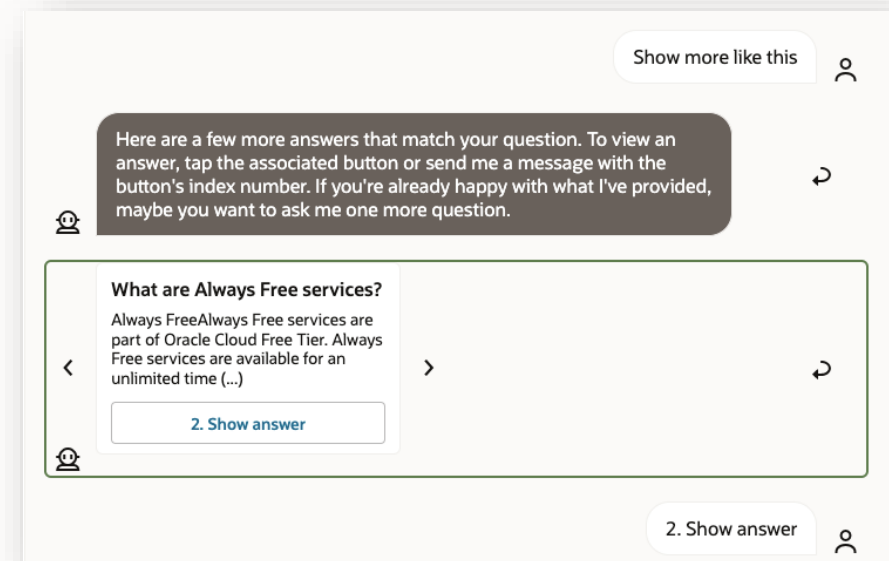
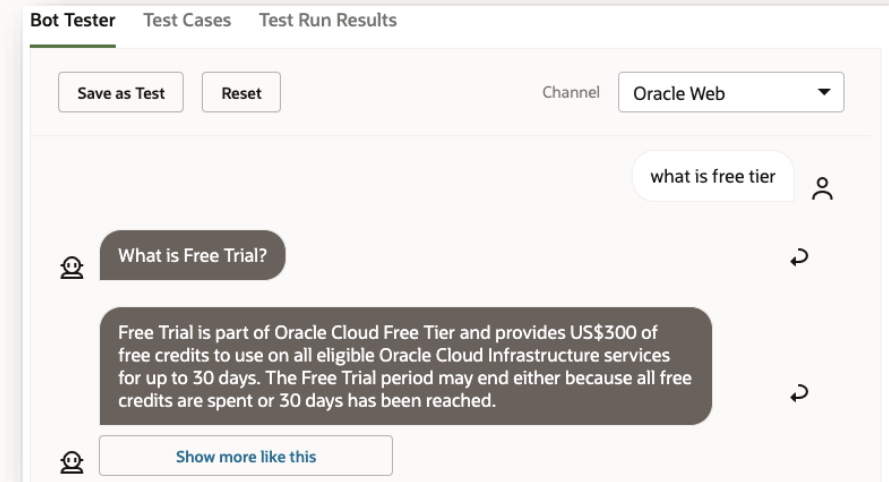
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But answer intents can easily be extended by using the dialog flow

Answer intents

Extended version

- We can extend the FAQs approach with the option to show related answers
- Bring in related articles as needed
 - Aids user discovery
 - Unobtrusive, low touch point
 - Triggered by the user if needed
 - Relevant to the current context
 - Only shown if relevant
 - Carousel through related articles



”

Quick start your FAQ development
with the Knowledge Document
capability

Answer intents

Import content with Knowledge Document

Knowledge Document feature in ODA

- Generates answer intents from FAQ page or document
- Uses AI to understand the format of the original document
- Generates starter utterances
 - However, we would generally advise further training
- We would still advise building “framework” features around this
 - Won't magically make answers conversational
 - Still need to implement your fallback strategies

New Knowledge Document

Name: ans.oci.freetier

Language: English

Select URL or upload a PDF document.

PDF URL

URL: https://www.oracle.com/uk/cloud/free/faq/

Create

Question	Answer	Generated Utterances
What is Oracle Cloud Free Tier?	Oracle Cloud Free Tier allows you to sign up for an Oracle Cloud account which provides a number of Always Free services and a Free Trial with US\$300 of free credit to use on all eligible Oracle Cloud Infrastructure services for up to 30 days. The Always Free services are available for an unlimited period of time. The Free Trial services may be used until your US\$300 of free credits are consumed or the 30 days has expired, whichever comes first.	<ul style="list-style-type: none">• What is Free Oracle Cloud Tiers?• What is Oracle Cloud Free Levels?• What is Oracle Cloud Free Level?• What is Free Tier Oracle Cloud?• What is the free tier of Oracle Cloud?
Who should use Oracle Cloud Free Tier?	Oracle Cloud Free Tier services are for everyone. Whether you're a developer building and testing applications, a startup founder creating new systems with the intention of scaling later, an enterprise looking to test things before moving to cloud, a student wanting to learn, or an academic developing curriculum in the cloud, Oracle Cloud Free Tier enables you to learn, explore, build and test for free.	<ul style="list-style-type: none">• Who should use Free Oracle Cloud Tier?• Who should use the free Oracle cloud layer?• Who should use Oracle Cloud Free level?
Who is eligible for Oracle Cloud Free Tier?	Anyone who has previously not signed up for Oracle Cloud Free Tier or Free Trial is eligible.	<ul style="list-style-type: none">• Who is eligible for Oracle Cloud Free Level?• Who can obtain Oracle Cloud Free Tier?• Who is eligible for the Free Tier of Oracle Cloud?• Who is eligible for the Free tier of Oracle Cloud?• Who qualifies for Oracle Cloud Free Level?
Is Oracle Cloud Free Tier available in all countries?	Yes, Oracle Cloud Free Tier is currently available worldwide. See the data regions page for detailed service availability. If you are unable to find the country or territory you require, please contact Oracle Sales or Cloud Support using the Chat link in the menu bar. The Oracle Sales team can help you sign up for the Oracle Cloud Free Tier.	<ul style="list-style-type: none">• Is Oracle Cloud free level available in all countries?• Is Oracle Cloud Free Tier available in all country?• Is Oracle Cloud Free Level Available in all countries?• Is the Oracle Cloud Free Tier available in all countries?

Add Intents to Skill

Intents (67) Test Utterances

+ Add Intent More

Filter

Sort By: Alphabetical

- ans.oci.freetier000
- ans.oci.freetier001
- ans.oci.freetier002
- ans.oci.freetier003
- ans.oci.freetier004
- ans.oci.freetier005
- ans.oci.freetier006

ans.oci.freetier000

General Information

Conversation Name: What is Oracle Cloud Free Tier?

Name: ans.oci.freetier000

Description: What is Oracle Cloud Free Tier?

Answer: Oracle Cloud Free Tier allows you to sign up for an Oracle Cloud account which provides a number of Always Free services and a Free Trial with US\$300 of free credit to use on all eligible Oracle Cloud Infrastructure services for up to 30 days. The Always Free services are available for an unlimited period of time. The Free Trial services may be used until your US\$300 of free credits are consumed or the 30 days has expired, whichever comes first.



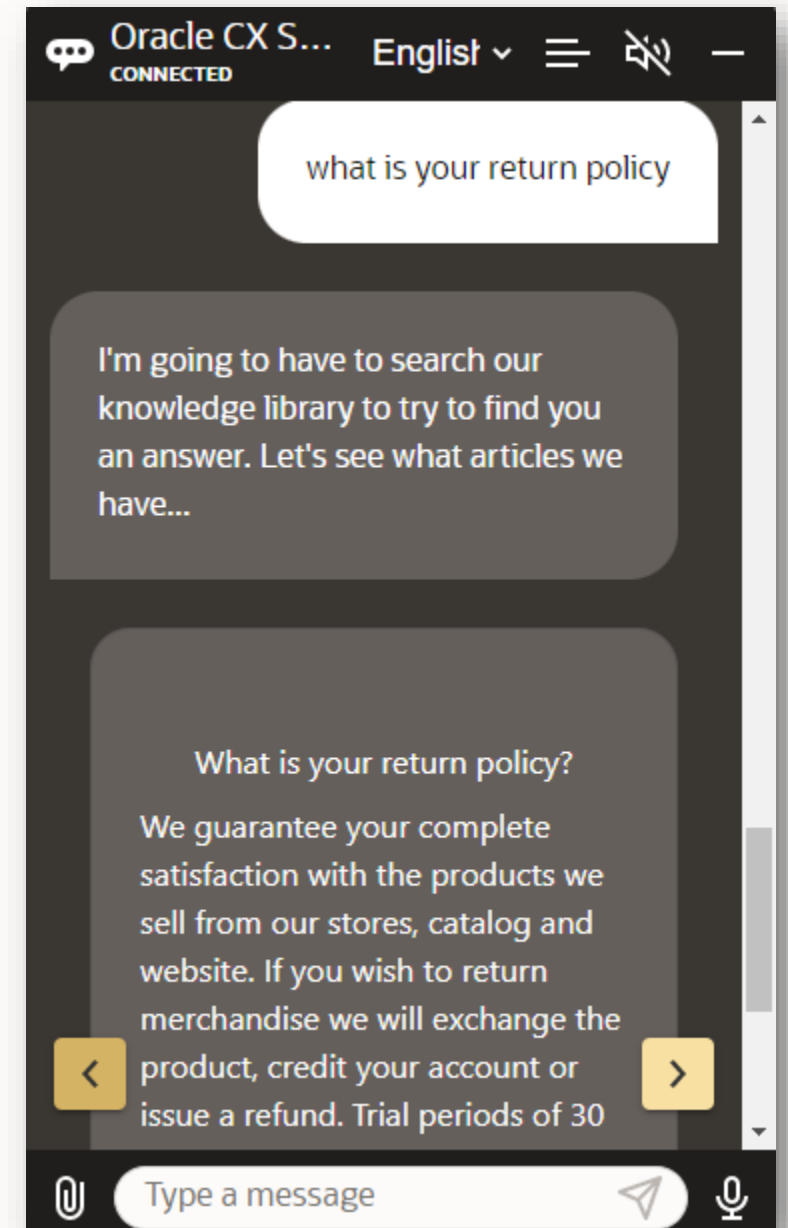
Strategies to build a great FAQ digital assistant

If you don't have an answer, find one

Knowledge base

Use in-domain search for dealing with the long tail

- Out-of-the-box integration with Oracle Knowledge
- Search any source using an API
- Search in Knowledge for specific intents or unknown intents
 - Have targeting intents which perform specific searches
 - Pre-created search strings or lookup
 - Perform searches based on an unresolved user input



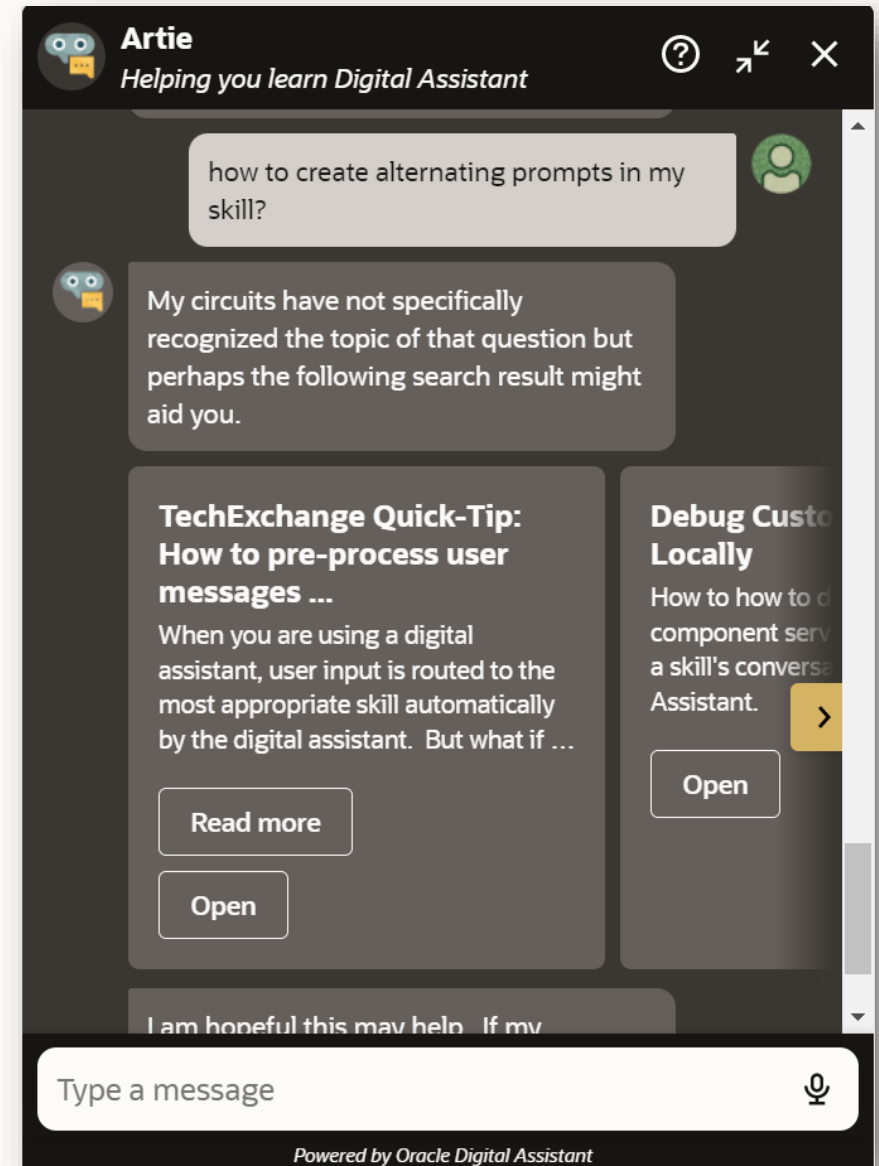
Strategies to build a great FAQ digital assistant

If you don't have an answer, find one

Blogs and pages

Intelligently search for out-of-domain answers

- You can search blogs and other sources if there is a search API available.
- [Artie](#) is falling back to documentation search and not using Google
- Ideal for in-domain but out-of-scope questions



Strategies to build a great FAQ digital assistant

If you don't have an answer, find one

Search engine

Intelligently search for out-of-domain answers

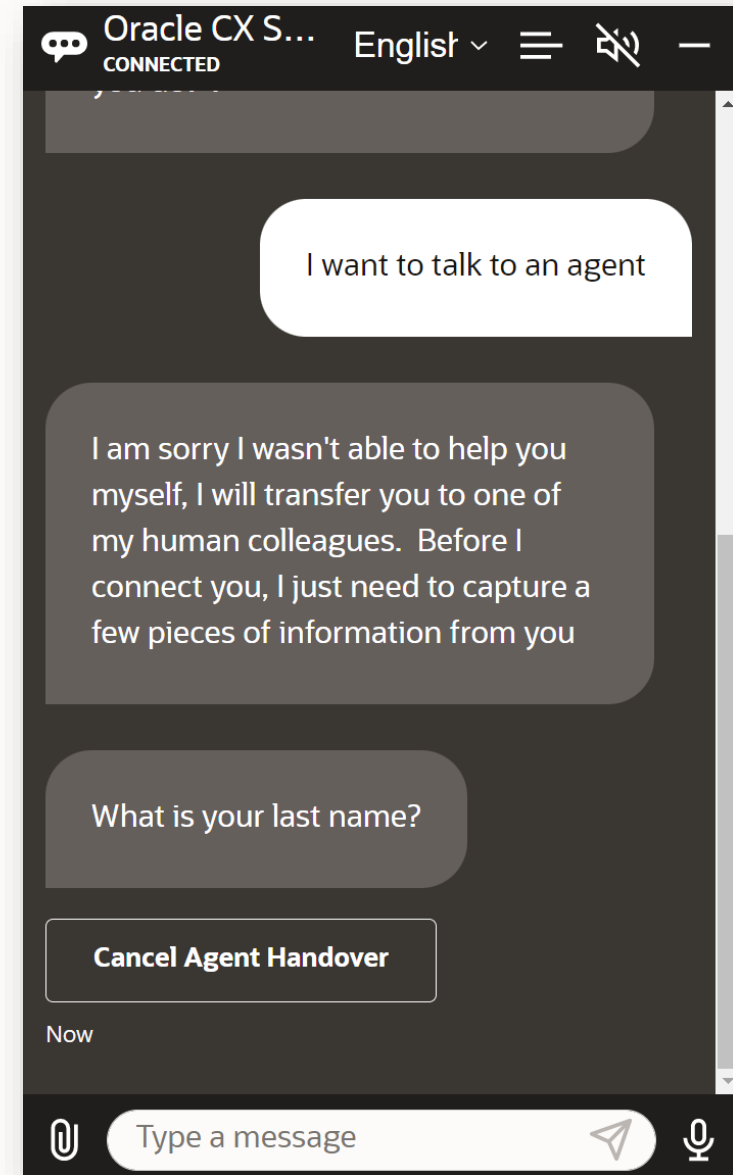
- The power of the internet!
 - SerpAPI
 - Bring back specific, or numerous answers
- Make it clear that it is an internet search
 - You can't be sure on what you are bringing back
- Decide if you want to stay in-domain
 - Using Oracle AI service to understand topic
 - Only search on healthcare related topics

The screenshot displays a digital assistant interface with a dark theme. At the top, a text box contains information about polyps and colorectal cancer screening. Below this is a button labeled 'Take a short quiz to get personal screening advice' and another labeled 'Learn More'. A search input field contains the query 'what is breast cancer'. The assistant's response is: 'I've haven't been trained to understand this specific health question, but let me check if I could find some information on the internet.' Below the response are three search results cards. The first card is titled 'What Is Breast Cancer? - American Cancer Society' and includes a 'Launch Item' button. The second card is titled 'What Is Breast Cancer? | CDC' and also includes a 'Launch Item' button. The third card is partially visible on the right. At the bottom, another search input field contains the query 'who is the president of the USA'. The assistant's response to this query is: 'I am known as the CDC digital worker. I was created, rather than born, in 2022. That's all there is to say about me!' Below this is another response: 'I can help with general information about "Colorectal Cancer". How may I offer assistance?'. The timestamp '5min ago' is visible at the bottom left of the interface.

Strategies to build a great FAQ digital assistant

When all else fails

- Sometimes the best course of action is to handover the conversation to a human
- The ultimate approach to handle questions from the user
- Typical approach for customers with a customer support capability



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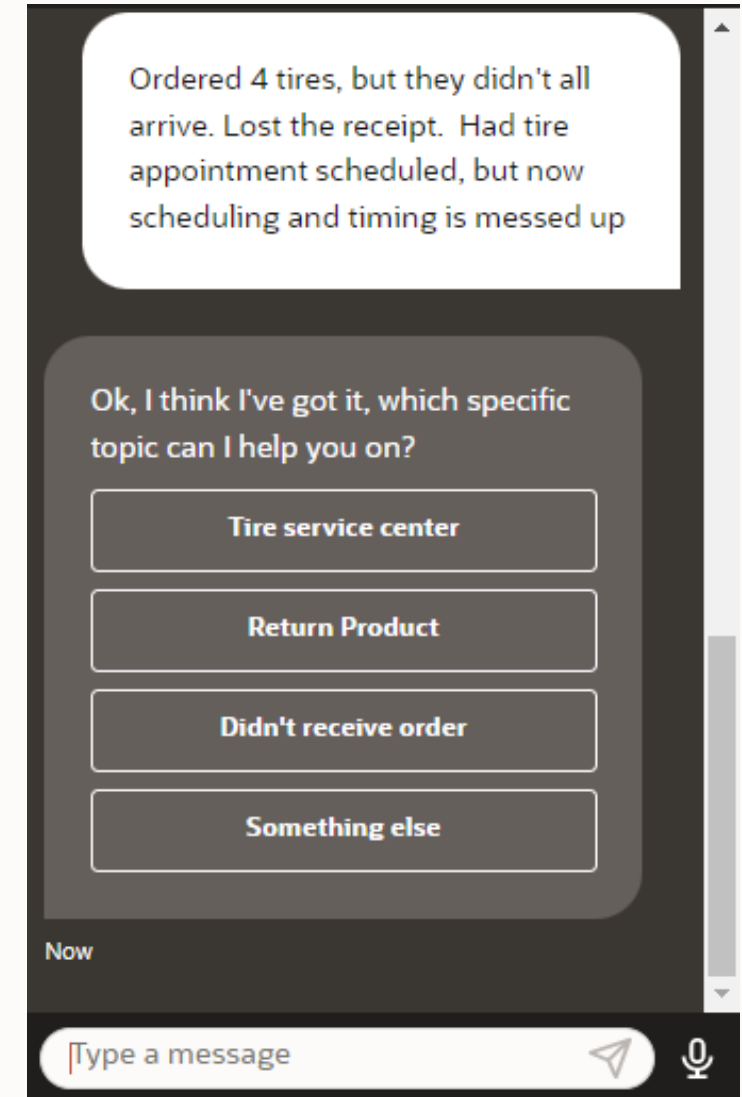
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Other tactics to consider

Embrace ambiguity and use it to your advantage

When you can't be sure, ask

- Puts the user in control
- Handled automatically by ODA
- Set wide win margins on skills



Other tactics to consider

Employ intelligent choice tactics

- Intelligent options
 - Quick replies guiding the user to the most relevant next steps

The image displays two screenshots of a chatbot interface, illustrating intelligent choice tactics. Both screenshots feature a dark background with white text and buttons.

Top Screenshot: A user asks, "what are the symptoms of colon cancer?". The chatbot responds with a message: "Colorectal polyps (abnormal growths in the colon or rectum that can turn into cancer if not removed) and colorectal cancer don't always cause symptoms, especially at first. Someone could have polyps or colorectal cancer and not know it. That is why getting screened regularly for colorectal cancer is so important. If you have symptoms, they may include— A change in bowel habits. Blood in or on your stool (bowel movement). Diarrhea, constipation, or feeling that the bowel does not empty all the way. Abdominal pain, aches, or cramps that don't go away. Weight loss and you don't know why. If you have any of these symptoms, talk to your doctor. They may be caused by something other than cancer. The only way to know what is causing them is to see your doctor." Below the message are four quick reply buttons: "Show more like this", "Schedule an appointment", "Take a short quiz to get personal screening advice", and "Learn More". A timestamp "A few seconds ago" is visible at the bottom left.

Bottom Screenshot: A user asks, "what kinds of tests are there?". The chatbot responds with a message: "A screening test is used to look for a disease when a person doesn't have symptoms. (When a person has symptoms, diagnostic tests are used to find out the cause of the symptoms.) Colorectal cancer almost always develops from precancerous polyps(abnormal growths) in the colon or rectum. Screening tests can find precancerous polyps, so that they can be removed before they turn into cancer. Screening tests can also find colorectal cancer early, when treatment works best." Below the message are four quick reply buttons: "Schedule an appointment", "Order an at-home colon cancer screening kit", "Take a short quiz to get personal screening advice", and "Learn More". A timestamp "Now" is visible at the bottom left.

Other tactics to consider

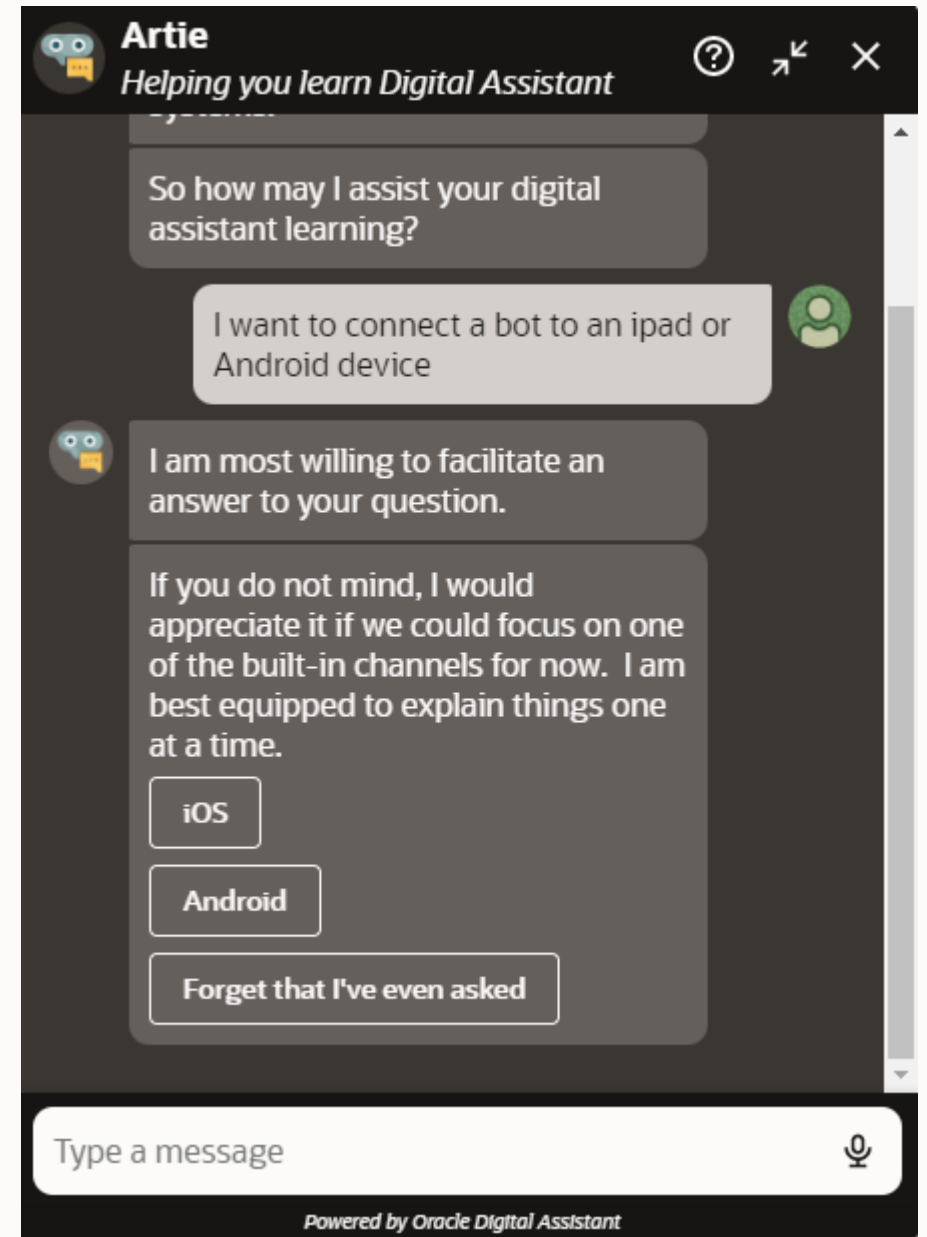
The best of the rest

“Human like” engagement

- Randomizing responses
- Logarithmic “back off”
- Typing delay
- Reflect back understanding

Smart strategies to deal with problems

- Capturing unresolved which are too short
- Progressive disclosure of information
- Clear exit strategies
- Unobtrusive feedback



Strategies to build a great FAQ digital assistant

” Why can't I just maintain all of my answers outside of ODA and look them up?

There is a challenge maintaining answer outside of ODA

- Be careful of multiple sources of truth
- Answers are not conversational
 - Not matching the tone of voice
 - Too long
 - User forced to find specific answer in text

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