



How to train your chatbot

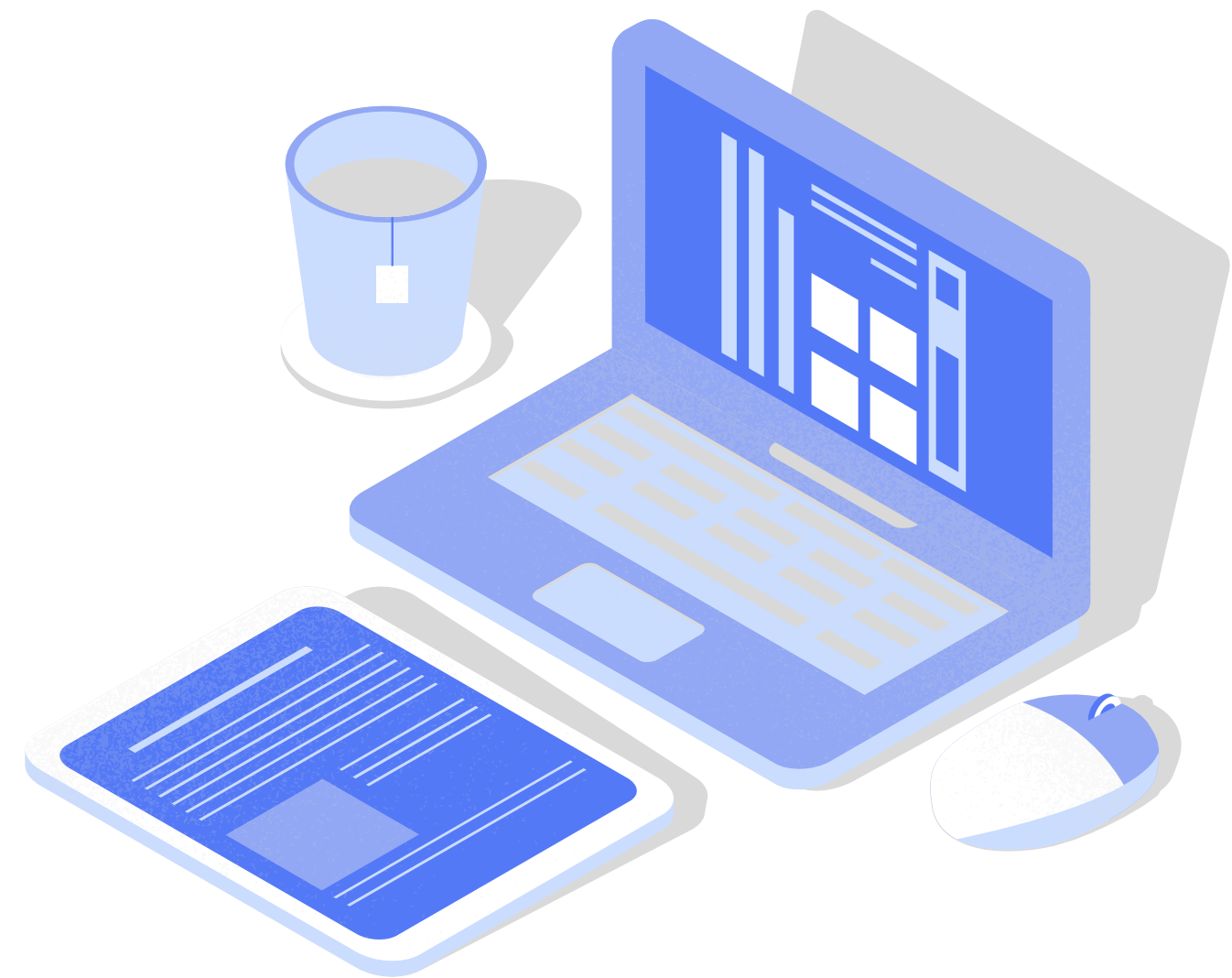
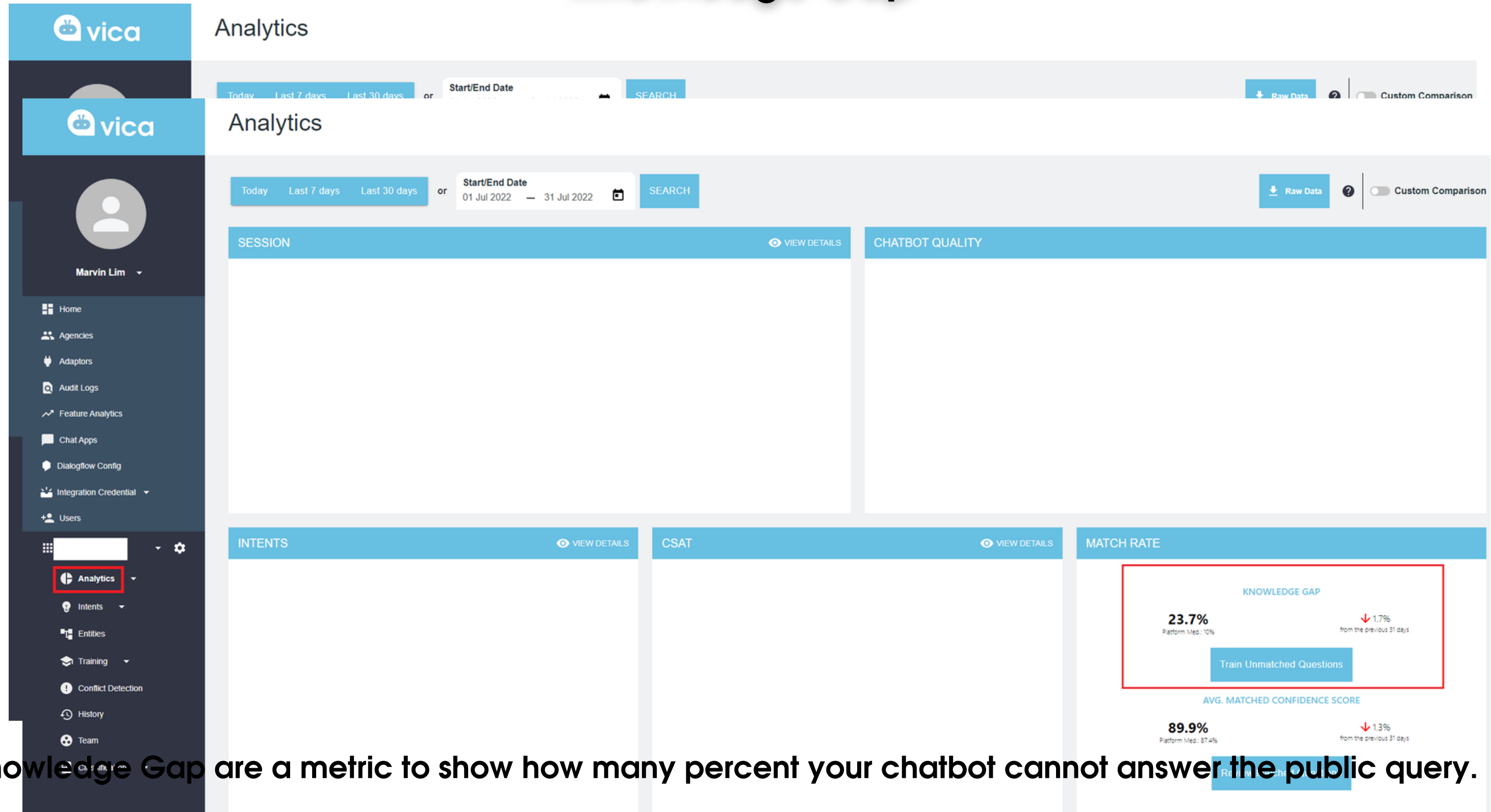


Table of Content



- Knowledge Gap
- Knowledge gap is high. What to do?
 - Training **Unmatched** Questions
 - Setting "Out Of Scope Status" for unmatched questions
 - Training **Matched** Questions
 - Cluster Training
- CSAT score too **low**. What to do?
- Too many intent **dislikes**. What to do?
- Too many intent dislikes (Sample Scenario)
- Confidence score too **low**. What to do?
- Additional Tips

Knowledge Gap



- Knowledge Gap are a metric to show how many percent your chatbot cannot answer the public query.
- A good benchmark is to look at (From 20% to 10% or less), the lower it is, the less un-matched questions will be displayed to user.
- In the next slide, we will see how we can improve the Knowledge Gap % so as to provide user a satisfactory response

High Knowledge gap, What to do?

-Training Unmatched questions

The screenshot displays the VICA Training interface. On the left is a dark sidebar with the VICA logo at the top, followed by a user profile for 'Marvin Lim'. Below this is a menu with options: Home, Agencies, Adaptors, Audit Logs, Feature Analytics, Chat Apps, Dialogflow Config, Integration Credential, Users, moe-ask-jamie (highlighted with a red box), Analytics, Intents, Entities, Training (highlighted with a red box), Clusters, and Questions (highlighted with a red box and showing a count of 2073). The main content area is titled 'Training' and features a filter bar with 'Today', 'Last 3 days', 'Last 5 days', and a date range selector set to '01 Aug 2022' to '31 Aug 2022'. Below the filter bar, there is a toggle switch for 'UNMATCHED QUESTIONS' (which is turned on and highlighted with a red box) and 'MATCHED QUESTIONS'. The main area displays a table of unmatched questions. The table has columns for 'QUESTIONS', 'STATUS', 'UPDATED BY', and 'ACTIONS'. All questions listed are in an 'Untrained' status. At the bottom right of the table, there is a pagination control showing 'Page 11 of 208'.

QUESTIONS	STATUS	UPDATED BY	ACTIONS
Hi I need to ask weather the MOE of Singapore admit the Diploma of TMC Academy?	Untrained		
How do I verify the school certificate I have is it valid	Untrained		
my transcripts are you correct. Who do I call?	Untrained		
what is pop and jazz	Untrained		
Get transcripts	Untrained		
Ok. Thanks for your reply.	Untrained		
I'm plus two failed but abroad study interested and part time job	Untrained		
what good school could my child go if she got AL14 for prelim	Untrained		
I would like to ask about the selection test. During the test, I used an erasable pen to answer the questions. I have asked the invigilators' permission and they have allowed me to use it. I just realized that some schools do not allow erasable pens, so I	Untrained		
how does liquidated damage be calculated	Untrained		

a. Admin will need to click on:

1. Chat AppID,
2. Training,
3. Questions,
4. Toggle “**UNMATCHED QUESTIONS**”, filter date range

Training

TodayLast 3 daysLast 5 days

or

Start/End Date01 Aug 2022 — 31 Aug 2022

SEARCH

UNMATCHED QUESTIONS

MATCHED QUESTIONS

NO MATCH QUESTIONS

QUESTIONS

How

P1 pupil Data form

☒ When will school end for primary students

Parents are indonesia citizens, can their children study in

Johor Baru students travelling daily to School in Singapore

Is this a scam?

Primary School

Rejection of teacher scheme

Where is sjij

What is the maximum age limit for admission to jc for fore

STATUS

UPDATED BY

ACTIONS

SESSION ID - e84a9092-9c7b-4b62-8c4b-c779e79cb9ad

POSTED	SOURCE	MESSAGE
31 Aug 2022 20:41	User	{\"event\":{\"name\":\"welcome\",\"from\":\"user\"}}
31 Aug 2022 20:41	Chatbot	Intent - Default Welcome Intent
31 Aug 2022 20:41	Chatbot	Intent - Default Welcome Intent
31 Aug 2022 20:41	Chatbot	Intent - Default Welcome Intent
31 Aug 2022 20:41	Chatbot	Intent - Default Welcome Intent
31 Aug 2022 20:42	User	When will school end for primary students
31 Aug 2022 20:42	Chatbot	Intent - Default Fallback Intent
31 Aug 2022 20:42	Chatbot	Intent - Default Fallback Intent
31 Aug 2022 20:42	User	When is PSLE
31 Aug 2022 20:42	Chatbot	Intent - General_Where can I find information on important dates for students taking The Nationa

ADD SELECTED TO INTENT

OUT OF SCOPE

1 row selected

Rows per page: 10

Page 1 of 208

Go

b. Admin can click on the speech bubble on the right section column to view snippet of chat transcript when it triggers the fallback intent.

(Triggering point will be marked as bold for ease of view)

Training

Today Last 3 days Last 5 days or Start/End Date 01 Aug 2022 — 31 Aug 2022 SEARCH

UNMATCHED QUESTIONS MATCHED QUESTIONS

NO MATCH QUESTIONS

ADD SELECTED TO INTENT OUT OF SCOPE

QUESTIONS STATUS UPDATED BY ACTIONS

How

P1 pupil Data form

☒ When will school end for primary students

Parents are indonesia citizens, can their children study in

Johor Baru students travelling daily to School in Singapor

Is this a scam?

Primary School

Rejection of teacher scheme

Where is sjij

What is the maximum age limit for admission to jc for fore

1 row selected Rows per page: 10

Select/Create an intent to add the previously selected questions as training phrases.

Search Intent

Intents

Most recent training phrases

Sec1_Can I save my data/transaction in the Secondary 1 – Internet System (S1-IS), log out and co

PSEA_How do I apply for the withdrawal of the Post-Secondary Education Account (PSEA) for repa

DSASEC_When will the schools start inviting my child for interviews / auditions?

MK_I am a Singapore Citizen parent with a child who is an International Student. What docume

CONFIRM CANCEL

OR

CREATE NEW

Please select an intent on the left panel to see the most recent training phrases tied to the selected intent.

Page 1 of 208 Go


c. Admin can

- Select the checkbox on the questions they liked to train.
- Search for existing intent OR Select the current list of intent OR Create new intent
- Remember to click “Confirm” to train the chatbot



**What happened after clicking the “Confirm” button?
(The specific question will be added to the respective intent as a “Training Phrase”)**



Setting "Out Of Scope status" for unmatched questions

Training

Today Last 3 days Last 5 days or Start/End Date 22 Sep 2022 — 26 Sep 2022  SEARCH

UNMATCHED QUESTIONS ☒ MATCHED QUESTIONS

NO MATCH QUESTIONS  ADD SELECTED TO INTENT  OUT OF SCOPE

 QUESTIONS	STATUS	UPDATED BY	ACTIONS
<input checked="" type="checkbox"/> zoo tickets	Out of Scope	marvin_lim_from.jobster@tech.gov.sg	

d. There may have instances where the utterances from the public does not falls within the agency knowledge base.

Admin can select the question and tag it as "Out Of Scope"

What happened after clicking the “Out Of Scope” button?

(The specific question will be labelled as "Out Of Scope", if such questions are being asked again, it will still triggers the fallback intent, however, the scoring metric will not be contributing to the knowledge gap and chatbot quality score),

Training Matched questions

The screenshot displays the VICA Training interface. On the left is a sidebar with navigation options: Home, Agencies, Adaptors, Audit Logs, Feature Analytics, Chat Apps, Dialogflow Config, Integration Credential, Users, moe-ask-jamie (highlighted), Analytics, Intents, Entities, Training (highlighted), Clusters, and Questions (2073). The main area is titled 'Training' and includes filters for 'Today', 'Last 3 days', 'Last 5 days', and a date range '01 Aug 2022 - 31 Aug 2022'. A toggle switch for 'MATCHED QUESTIONS' is highlighted with a red box. Below this is a table of matched questions with columns for Questions, Matched Intent, Matched Intent Label, Confidence Score, and Actions. The table lists 10 questions, each with a confidence score of 65.1%. At the bottom right, there is a pagination bar showing 'Page 3 of 1832'.

QUESTIONS	MATCHED INTENT	MATCHED INTENT LABEL	CONFIDENCE SCORE	ACTIONS
<input type="checkbox"/> When will be the next scholarship for secondary 1!	ASEAN_How do I apply for the scholarship?	ASEAN Scholarships	65%	
<input type="checkbox"/> singapore industry scholarship	ASEAN_How do I apply for the scholarship?	ASEAN Scholarships	65.1%	
<input type="checkbox"/> When will my application be processed?	Canteen_What is the selection process for school canteen stall applicants? How do I know the outc	Canteen	65.1%	
<input type="checkbox"/> May I know if Miss Napas Taechaaukarakul has been selected or not?	SRE_How would I know the outcome of my registration for the Scheme for Relief Educators (SRE)	SRE	65.1%	
<input type="checkbox"/> I want to know the place of AEIS	IS_How does an international student seek admission to Secondary 1 to 3 levels of a mainstream scho	International Students	65.1%	
<input type="checkbox"/> P1-IS meaning	P1_What is the Primary One Internet System (P1-IS)? Who can register for Primary One usi	P1 Registration	65.1%	
<input type="checkbox"/> Skills Future Courses	HED_CET_What are modular courses?	HED_CET	65.1%	
<input type="checkbox"/> The Status is not updated	SchFees_I have a recent change of citizenship, but am still being billed based on the old citizen	School fees	65.1%	
<input type="checkbox"/> Enhanced Financial Support for Needy Students Amidst Rising Cost Pressures, how to register?	FAS_How do I apply for MOE Financial Assistance Scheme (FAS) for my child?	FAS	65.1%	
<input type="checkbox"/> Primary 1 appeal	FAS_I do not meet the income limit for my child to be eligible for the MOE Financial Assisten	FAS	65.1%	

- a. Admin will need to click on:
1. Chat AppID,
 2. Training,
 3. Questions,
 4. Toggle “**MATCHED QUESTIONS**”, filter date range

Training

TodayLast 3 daysLast 5 days

or

Start/End Date01 Aug 2022 — 31 Aug 2022

SEARCH

UNMATCHED QUESTIONS ☐ MATCHED QUESTIONS ☒

QUESTIONS

When will be the next scholarship for secondary 1!

singapore industry scholarship

When will my application be processed?

May I know if Miss Napas Taechaaukarakul has been sele not?

I want to know the place of AEIS

P1-IS meaning

Skills Future Courses

The Status is not updated

Enhanced Financial Support for Needy Students Amidst F Pressures, how to register?

Primary 1 appeal

Rows per page: 10

SESSION ID - 285326b2-1cda-492b-bc32-a7b0e88d3676

POSTED	SOURCE	MESSAGE
28 Aug 2022 15:07	User	{ "event": { "name": "welcome", "from": "user" } }
28 Aug 2022 15:07	Chatbot	Intent - Default Welcome Intent
28 Aug 2022 15:07	Chatbot	Intent - Default Welcome Intent
28 Aug 2022 15:07	Chatbot	Intent - Default Welcome Intent
28 Aug 2022 15:07	Chatbot	Intent - Default Welcome Intent
28 Aug 2022 15:08	User	Primary 1 appeal
28 Aug 2022 15:08	Chatbot	Intent - FAS_ I do not meet the income limit for my child to be eligible for the MOE Financial Assistan
28 Aug 2022 15:08	User	Appeal for primary 1 school space
28 Aug 2022 15:08	Chatbot	Intent - FAS_ I do not meet the income limit for my child to be eligible for the MOE Financial Assistan
28 Aug 2022 15:08	User	How do I apply for MOE Financial Assistance Scheme FAS for my child?
28 Aug 2022 15:09	Chatbot	Intent - FAS_ How do I apply for MOE Financial Assistance Scheme (FAS) for my child?

ADD SELECTED TO INTENT

IGNORE

CONFIDENCE SCORE	ACTIONS
65%	
65.1%	
65.1%	
65.1%	
65.1%	
65.1%	
65.1%	
65.1%	
65.1%	
65.1%	
65.1%	
65.1%	

Page 3 of 1832 Go

b. Admin can click on the speech bubble on the right section column to view snippet of chat transcript when it triggers the fallback intent.

(Triggering point will be marked as bold for ease of view)

Training

Today Last 3 days Last 5 days or Start/End Date 01 Aug 2022 — 31 Aug 2022 SEARCH

UNMATCHED QUESTIONS ☐ MATCHED QUESTIONS ☒

MATCHED QUESTIONS

QUESTIONS	MATCHED INTENT	MATCHED INTENT LABEL	CONFIDENCE SCORE	ACTIONS
<input type="checkbox"/> When will be the next scholarship for secondary 1!			65%	
<input type="checkbox"/> singapore industry scholarship			65.1%	
<input type="checkbox"/> When will my application be processed?			65.1%	
<input type="checkbox"/> May I know if Miss Napas Taechaaukarakul has been sele not?			65.1%	
<input type="checkbox"/> I want to know the place of AEIS			65.1%	
<input type="checkbox"/> P1-IS meaning			65.1%	
<input type="checkbox"/> Skills Future Courses			65.1%	
<input type="checkbox"/> The Status is not updated			65.1%	
<input type="checkbox"/> Enhanced Financial Support for Needy Students Amidst F Pressures, how to register?			65.1%	
<input checked="" type="checkbox"/> Primary 1 appeal			65.1%	

1 row selected Rows per page: 10

ADD SELECTED TO INTENT IGNORE

Select/Create an intent to add the previously selected questions as training phrases.

Search Intent

Intents

Sec1_Can I save my data/transaction in the Secondary 1 – Internet System (S1-IS), log out and co

PSEA_How do I apply for the withdrawal of the Post-Secondary Education Account (PSEA) for repa

DSASEC_When will the schools start inviting my child for interviews / auditions?

MK_I am a Singapore Citizen parent with a child who is an International Student. What docume

PSEA_How do I apply for the withdrawal of the Post-Secondary Education Account (PSEA) for repa

Most recent training phrases

Please select an intent on the left panel to see the most recent training phrases tied to the selected intent.

CONFIRM CANCEL

OR

CREATE NEW

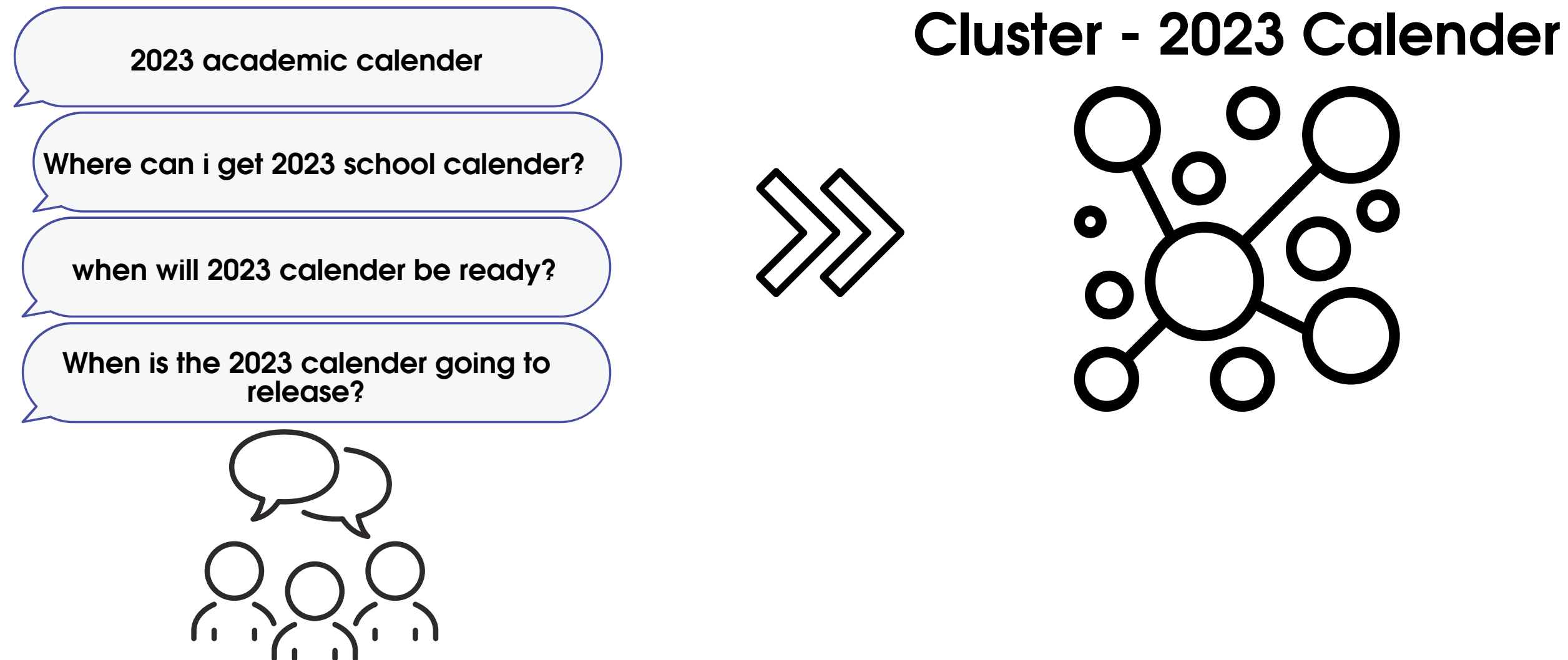
c. If the Matched Questions are not matching to the correct intent,

Admin can

- Select the checkbox on the questions they liked to re-train.
- Search for existing intent OR Select the current list of intent OR Create new intent
- Remember to click “Confirm” to re-train the chatbot

What happened after clicking the “Confirm” button
(The specific question will be added to the respective intent as a “Training Phrase”)

Cluster Training



- Clustering Job will be executed every 2 weeks by VICA, utterances with similar meaning will be grouped and be displayed in cluster training for ease of mass training.
- VICA System can suggest the group of similar messages that can be added to existing intent or new intents
- Admin will need to click on:
 - Chat AppID
 - Training
 - Clusters

Marvin Lim

Home

Agencies

Adaptors

Audit Logs

Feature Analytics

Chat Apps

Dialogflow Config

Integration Credential

Users

moe-ask-jamie

Analytics

Intents

Entities

Training

Clusters

Questions

2073

Conflict Detection

History

Team

Classification

Clusters

Please select the time period you want to train/look at

13 Aug 2022 - 27 Aug 2022

UNMATCHED CLUSTERS ?

☒ CLUSTER 2 - 2023

18

Not Trained

☒ 2023 academic calendar

☒ Where can I get 2023 school calendar?

☒ Hi, may i ask when is the moe academic calendar for 2023 out?

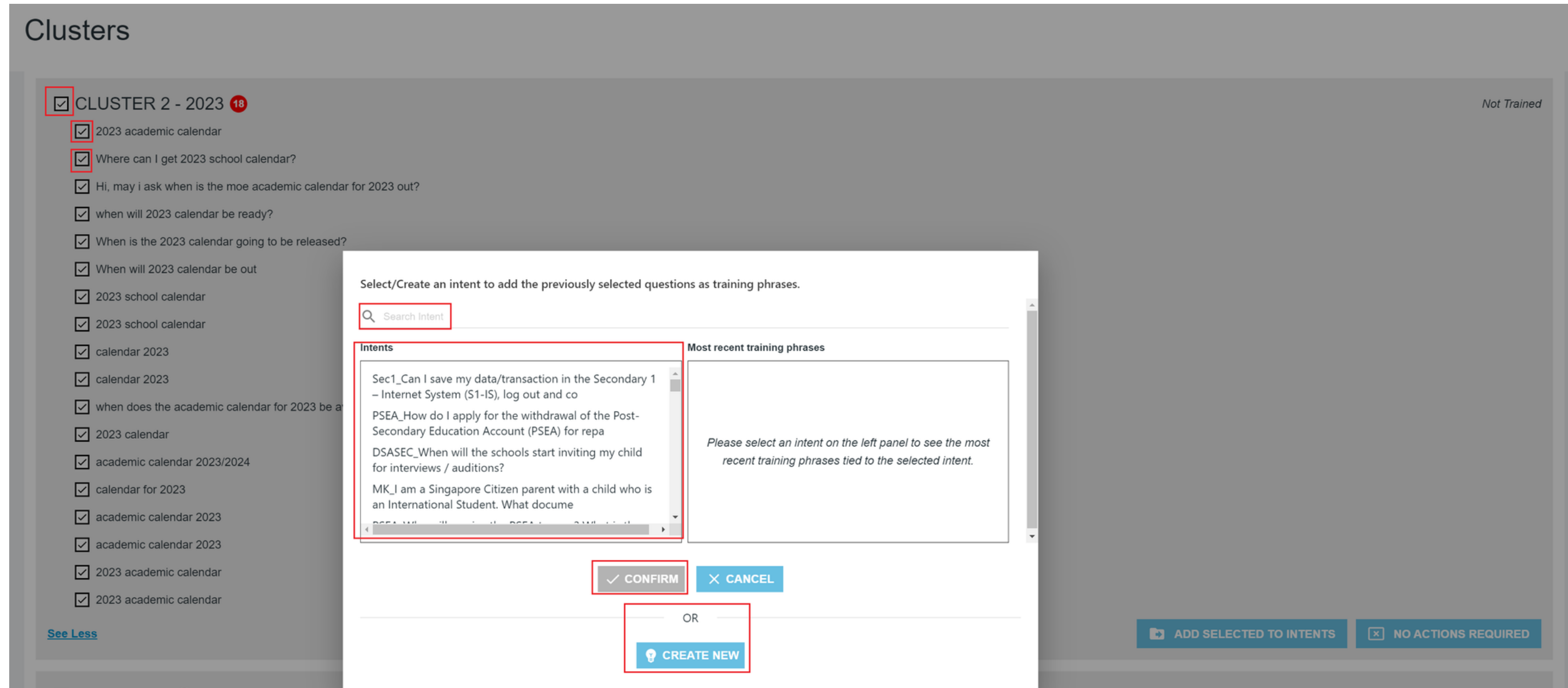
☒ when will 2023 calendar be ready?

☒ When is the 2023 calendar going to be released?

[See More](#)

ADD SELECTED TO INTENTS

NO ACTIONS REQUIRED



d. Admin can

- Select the checkbox on the cluster they liked to re-train. Select all, or de-select certain checkbox in question.
- Search for existing intent OR Select the current list of intent OR Create new intent
- Remember to click “Confirm” to mass train the chatbot

**What happened after clicking the “Confirm” button
(The specific question will be added to the respective intent as a “Training Phrase”)**

CSAT score too low, What to do?

Least Satisfaction (1 - 6) **Most Satisfaction**

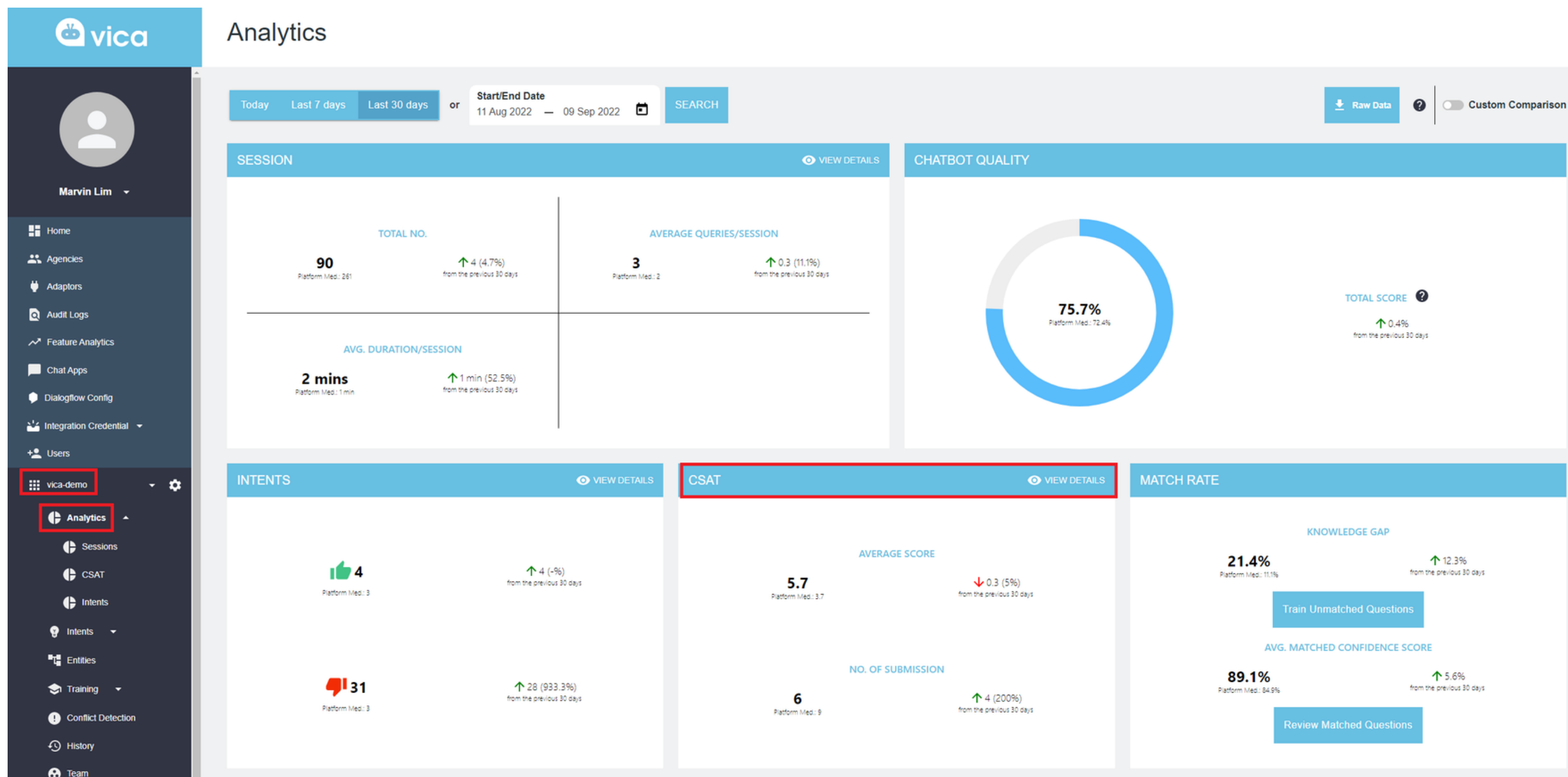


How would you rate your chat
experience?



a. CSAT, also known as (Customer Satisfactory) score.

User may leave a score ranging from 1 to 6 star, with/without remarks in the chatbot.
It is a tool to benchmark how happy/unhappy the users are after they used the chatbot.

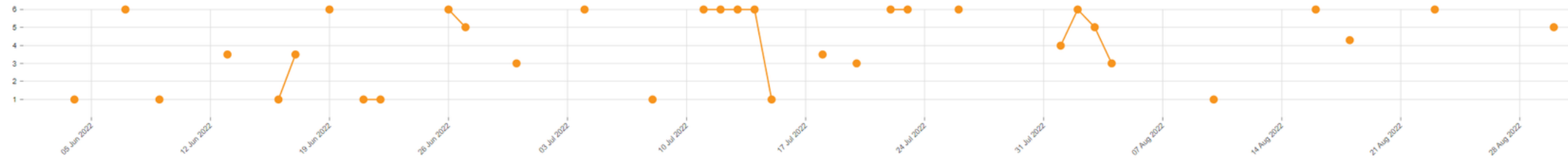


b. CSAT can be access from Chatbot ID, Analytics / CSAT.
User can also get more details by clicking "VIEW DETAILS" in the CSAT module.

CSAT ANALYTICS

CSAT SCORE

DETAILS



BY SESSION

Click here to filter score in ascending/descending order

DOWNLOAD (3)
CHAT TRANSCRIPT

<input type="checkbox"/>	SESSION ID	STARTED ON	CHANNEL	CSAT SCORE <input type="button" value="↓"/>	CSAT COMMENTS	ACTIONS
<input type="checkbox"/>	1e0166ee-faee-40aa-9b34-0f6c58fccf04	30 Aug 2022 17:21	WEB	5.0		
<input type="checkbox"/>	82c97139-e56a-4aad-bf65-a9da67cff7f7	03 Aug 2022 14:26	WEB	5.0		
<input type="checkbox"/>	804025c6-2c90-449f-b0d7-ac07f318ffd7	20 Jul 2022 11:55	WEB	5.0		
<input type="checkbox"/>	2549d7f6-da3f-45c6-92c9-7176db73c696	27 Jun 2022 17:07	WEB	5.0		
<input type="checkbox"/>	5d0570bb-c25c-4252-949a-35a40730b038	01 Aug 2022 09:43	WEB	4.0		
<input type="checkbox"/>	153303d5-f64c-4ec9-af4d-a0df5f7e949f	04 Aug 2022 11:31	WEB	3.0		
<input checked="" type="checkbox"/>	b4013beb-c87a-4d50-9404-e5b179b5100e	30 Jun 2022 16:42	WEB	3.0	the form doesnt even work with error message ""DPO Connect Registration" is not available. If you think this is a mistake, please contact the agency that gave you the form link."	
<input checked="" type="checkbox"/>	ad044ebb-bf15-4cf6-9591-447486a957d2	18 Aug 2022 09:28	WEB	1.0	DID NOT ANSWER MY QUESTION	
<input checked="" type="checkbox"/>	e19ea671-44dd-4bce-a3c8-67d4afac2f3f	10 Aug 2022 06:05	WEB	1.0	Not answering question	
<input type="checkbox"/>	860d821e-71a6-484b-9e84-f590ecd97601	20 Jul 2022 10:24	WEB	1.0		

Rows per page: 10

Page 3 of 125 Go

c. CSAT can be access from Chatbot ID, Analytics / CSAT.
You can also get more details by clicking "VIEW DETAILS" in the CSAT module.

d. You may filter the CSAT score by clicking on the arrow button in ascending / descending order.

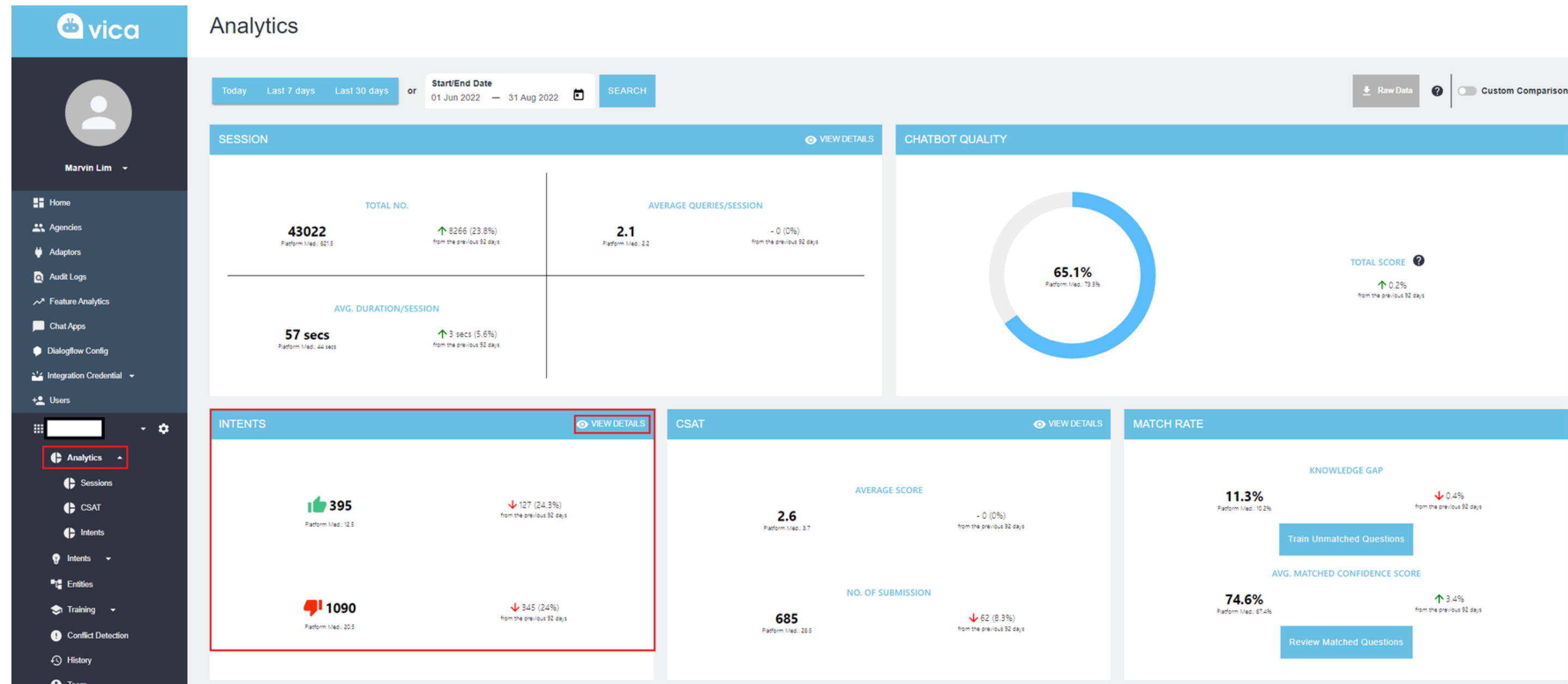
Then you may look at lower score < 3 with remarks to see the feedbacks given by users.
Select the checkbox and click on "DOWNLOAD Chat Transcript" on the right column to view a snippet of conversation history between user and the chatbot.



e. CSV file will be downloaded, and you will be able to review why did the user leave low CSAT score and remarks on your chatbot.

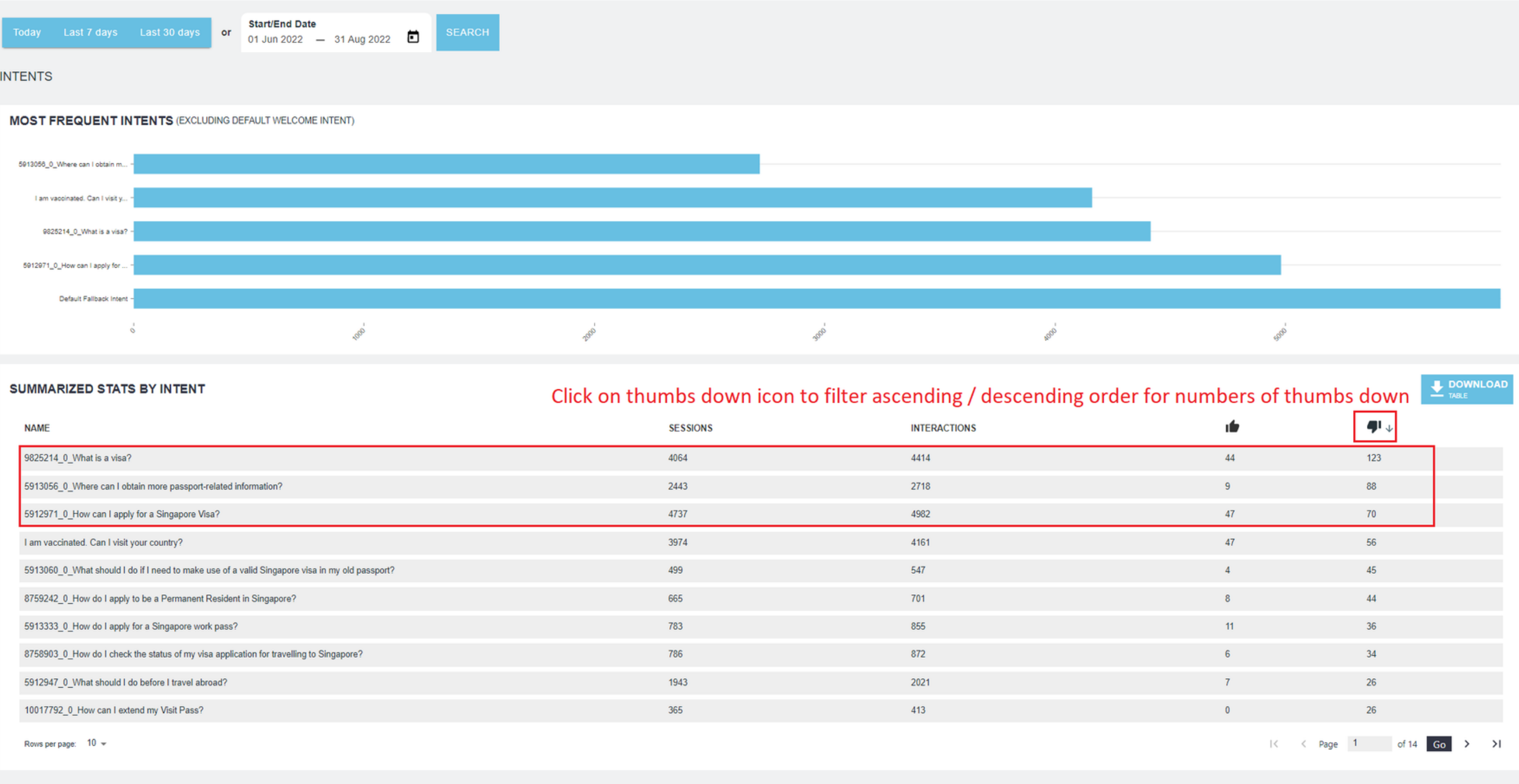
Then you will be able to train the chatbot better to address your user's queries

Too many intent dislikes 👎 What to do?



a. Intent Analytics can be access from Chatbot ID, Analytics / Intents.
You can also get more details by clicking "VIEW DETAILS" in the Analytics Intent module.

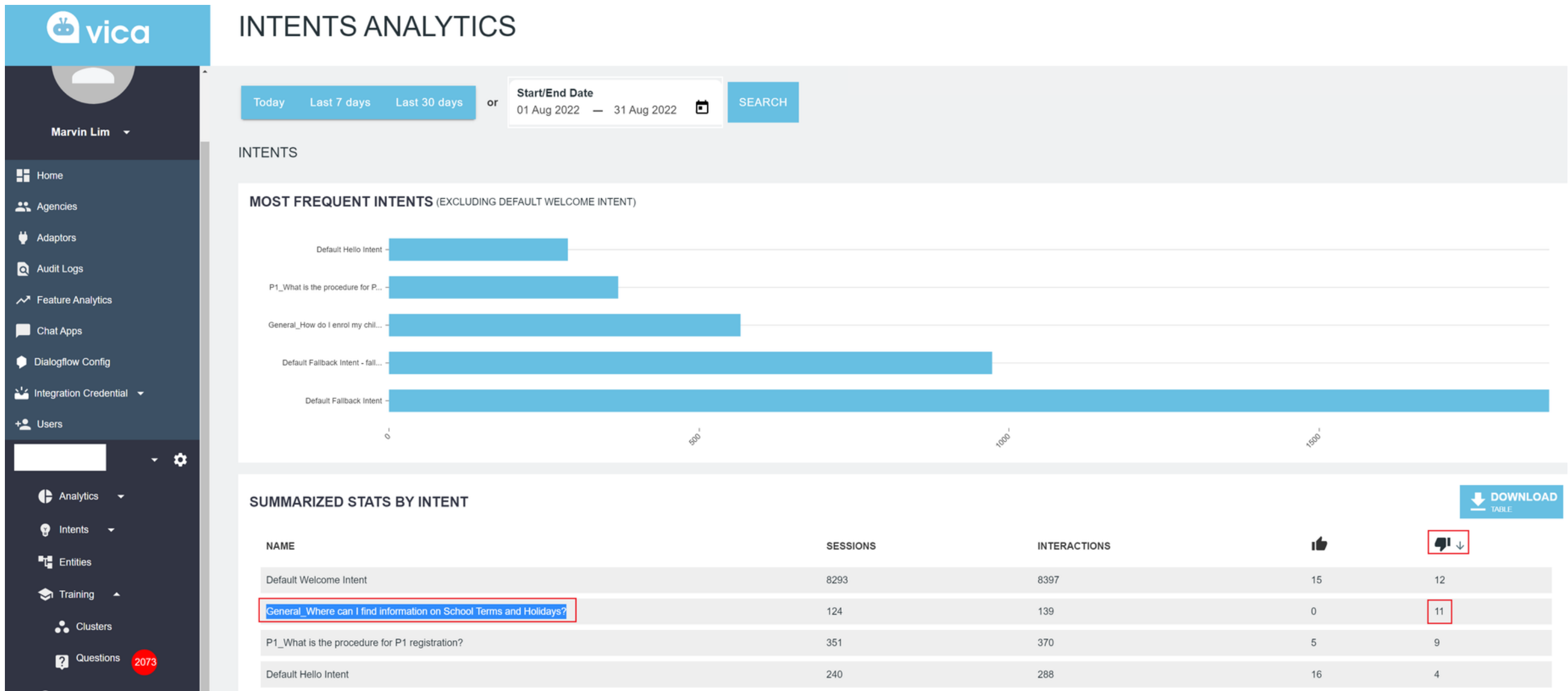
INTENTS ANALYTICS



b. Note down the top 3 - 5 top intents with the most thumbs down. During performing training on **unmatched** / **matched** questions, you can reference how these intents are giving 'problems' for the users of the chatbot.

- It could be:
- not addressing user queries by triggering incorrect intent (False positives)
 - broken hyperlinks in bot response
 - Entity was not annotated correctly in an intent's training phrase (See next page)

Too many intent dislikes (Sample Scenario)



a. Click on Intent under Analytics module. Specify a date range, click on thumbs down icon to sort ascending/descending order.

b. Note down the intent name of high counts of 'dislikes'

Too many intent dislikes (Sample Scenario)

The screenshot shows the VICA Training interface. On the left is a sidebar with navigation options: Home, Agencies, Adaptors, Audit Logs, Feature Analytics, Chat Apps, Dialogflow Config, Integration Credential, Users, moe-ask-jamie, Analytics, Intents, Entities, Training (highlighted), Clusters, Questions (2073), and Conflict Detection. The main area is titled 'Training' and contains a search bar with filters for 'Today', 'Last 3 days', 'Last 5 days', 'Start/End Date' (01 Aug 2022 to 31 Aug 2022), and a 'SEARCH' button. Below the search bar, there are tabs for 'UNMATCHED QUESTIONS' and 'MATCHED QUESTIONS' (selected). The 'MATCHED QUESTIONS' section shows a table with columns: QUESTIONS, MATCHED INTENT, MATCHED INTENT LABEL, CONFIDENCE SCORE, and ACTIONS. A filter is applied to the 'MATCHED INTENT' column, showing 'MATCHED INTENT contains General_Where can I find information on School Terms and Holidays?'. The table lists 10 rows of questions, all with a 'General' intent label and confidence scores ranging from 72.6% to 91.9%. The 'Questions' column contains various queries related to school terms and holidays. The 'Actions' column has a chat icon for each row. At the bottom, there is a pagination bar showing 'Page 1 of 16' and a 'Go' button.

QUESTIONS	MATCHED INTENT	MATCHED INTENT LABEL	CONFIDENCE SCORE	ACTIONS
Columns	Operator	Value		
MATCHED INTENT	contains	General_Where can I find information on School Terms and Holidays?		
+ ADD FILTER				
Sept any school holiday?	General_Where can I find information on School Terms and Holidays?	General	89.2%	
Can you please show me the school holidays?	General_Where can I find information on School Terms and Holidays?	General	91%	
holiday	General_Where can I find information on School Terms and Holidays?	General	84.2%	
School Calendar 2023	General_Where can I find information on School Terms and Holidays?	General	87%	
When is 2023 school holidays releasing?	General_Where can I find information on School Terms and Holidays?	General	87.5%	
When will school holidays 2023 date be released	General_Where can I find information on School Terms and Holidays?	General	72.6%	
When is the September holidays for secondary school	General_Where can I find information on School Terms and Holidays?	General	91.6%	
2023 school terms and holidays.	General_Where can I find information on School Terms and Holidays?	General	89%	
			88.6%	
			91.9%	

- Go to training module, click on 'Questions'
- Specify date range, toggle 'Matched Questions'
- Click on the ":" icon beside 'Matched Intent' to filter data for the intent name (with high number of dislikes)
- This way, you can find out all related utterances which triggers the intent (Whether it is a **positive matched** or **false-positive match**) and then training the selected questions efficiently.

Confidence score **too low**, What to do?

The screenshot displays the VICA application settings interface. On the left is a dark sidebar with the VICA logo at the top, a user profile for 'Marvin Lim', and a list of navigation items: Home, Agencies, Adaptors, Audit Logs, Feature Analytics, Chat Apps, Dialogflow Config, Integration Credential, and Users. Below these are expandable sections for Analytics, Intents, and Entities. A red box highlights a settings icon in the sidebar. The main content area is titled 'App Settings' and has tabs for General, Web Chat, Knowledge Base, and Bot Publishing. The 'General' tab is active and contains an 'APP INFORMATION' section with input fields for APP ID and PROJECT ID. Below this is the 'ML CLASSIFICATION THRESHOLD' section, which includes a text description, a 'THRESHOLD VALUE' input field set to 0.3, and a green 'SAVE' button. A red box highlights this entire section. At the bottom of the main content area, a red note states: 'Note: Do remember to publish the chatbot into production environment after adjusting the threshold value'.

App Settings

General Web Chat Knowledge Base Bot Publishing

APP INFORMATION

APP ID

PROJECT ID

ML CLASSIFICATION THRESHOLD

Define the threshold value for the confidence score. If the return value is less than the threshold value, then a fallback intent will be triggered, or if there is no fallback intent defined, no intent will be triggered.

THRESHOLD VALUE
0.3 **SAVE**

Note: Do remember to publish the chatbot into production environment after adjusting the threshold value

The ML Classification threshold determines the lowest matching score that is acceptable to trigger a bot response. If the matching score falls below the confidence score, the bot will trigger a Fallback interaction.

Not advisable to set more than 0.75

TRAINING PHRASE ?

Master Question ?
Information on Govtech Location

” Add Phrase here

Hint: Please press "Enter" to add new training phrase.

EXISTING TRAINING PHRASE

” Information on Govtech Location

” how to go to govtech

” where is govtech?

” what is govtech location?

” what is the location of govtech?

Rows per page: 10 ▾

Notice the public asked "what is the location of govtech" matches the training phrase fully and it returns **100%** confidence score in the training module.

But when the public asked "address of govtech please", it returns **73.4%** matched intent. This is because there are no "address of govtech please" training phrase in the intent, thus not matching it 100%

Improvements Suggestions

- Include Training phrases with different iterations (eg. i liked to buy, to make a purchase, placing an order)
- Increment adjust of ML classification threshold (set ML classification threshold between 0.5 - 0.75)
(Do remember to publish content to production environment after setting the threshold)
- Proper entity tagging (annotate correct TP to entity, eg. **visa**, **mastercard**, **amex** tagging to **Paymentoptions** entity)

Training

Today Last 3 days Last 5 days or Start/End Date
08 Sep 2022 — 12 Sep 2022 SEARCH

UNMATCHED QUESTIONS MATCHED QUESTIONS

MATCHED QUESTIONS

ADD SELECTED TO INTENT IGNORE

<input type="checkbox"/>	QUESTIONS	MATCHED INTENT	MATCHED INTENT LABEL	CONFIDENCE SCORE	ACTIONS
<input type="checkbox"/>	address of govtech please	Govtech Location		73.4%	
<input type="checkbox"/>	govtech location	Govtech Location		82%	
<input type="checkbox"/>	{"event":{"name":"welcome","from":"user"}}	Default Welcome Intent		100%	
<input type="checkbox"/>	what is the location of govtech	Govtech Location		100%	

Rows per page: 10 ▾

|< < Page 1 of 1 Go > >|

Additional Tips:

All Intents should have distinct meanings

All intents (and associated variations) should have meanings that are distinct from other intents (and associated variations). In other words, different intents shouldn't contain similar variations, because this will prevent the NLP Engine from learning how to recognize those phrases.

If there are multiple intents with identical meanings, they should be merged.

DON'T	DO (Merged Intent)
Intent: How much is the LPA?	Intent: How much is the LPA?
Training Phrase: Can you tell me how much the LPA costs?	Training Phrase: Can you tell me how much the LPA costs?
Intent: What are the charges for an LPA?	Training Phrase: What are the charges for an LPA?
Training Phrase: What are the LPA fees?	Training Phrase: What are the LPA fees?

Additional Tips:

Training phrase variations should be diverse

While retaining the same meaning, include diverse variations of questions, commands, verbs, and synonyms for common nouns to ensure your phrases cover a broad spectrum of possible requests.

Variations that are too similar to each other are not helpful to NLP performance.

Sample Intent: "Book a train ticket"	
DON'T Variations of Training Phrases	DO Variations of Training Phrases
Book a train ticket	Purchasing train ticket
Book train	I would like to book a train ticket
Book ticket	I need to take the train
Book me a ticket	Can i order a train ticket?
Train Ticket	I need to be in Paris next Friday

Additional Tips:

No duplicate training phrases should exist

There should never be duplicate training phrases, either between different intents or within the same intent.

To determine how to fix duplicate training phrases between different intents, check on the following:

- Does the training phrase match the meaning of its intent?
 - If not, you could consider adding more detail to the training phrase or deleting it, as appropriate.
- Do the intents have distinct meanings?
 - If not, you could consider merging the intents.

Additional Tips:

Number of training phrases variations should be balanced

The number of variations between different intents should be well-balanced, ie. intents should have a roughly similar number of variations.

Otherwise, NLP classification will skew in favor of intents with a much larger number of variations.

This means that care should be taken during annotations process - real-world user utterances should only be added to an intent if they improve quality and diversity



Additional Tips:

Use Entities instead of multiple intents

For example, if you want to have an entertainment chatbot that handles digital content such as watching TV series and movies, you can choose to have these subject areas as separate intents, or the same intent with entities for specific data inside the sentences. In This case, the latter should be chosen for improved NLP performance.

The user utterances "Watch a **tv series**" and "Watch a **movie**" use the same vocabulary/verb of "Watch a". The format is the same, so it should be created as a single intent with a "content type" entity distinguishing TV series vs Movie.

Entity Name: Content Type	
Reference Value:	Synonym:
Movie	
TV Series	tv show, tv drama,
Documentaries	docu,

Additional Tips:

Entity annotations should be consistent

- Review your variations and ensure that entity annotations are pointing to the correct entities
- You should not have text in variations that is entity-annotated in some cases but not others
- Be sure that the entity-annotated text in multiple variations contains similar portions of the variation. For example, consider that you have a variation "Set alarm at 6 a.m.", where "6 a.m." is annotated as (Date entity). If you have another variation "wake me up at 7 a.m.", do annotate "7 a.m.", but not annotate "up at 7 a.m.".

Annotated text in variations should have variety

- For example, if you are providing time values that should be parsed as (Time) entities in variations, do not provide the same time format in all variations. Your variations should have a variety of time examples like:
 - "7 a.m."
 - "8 p.m."
 - "9 o'clock"