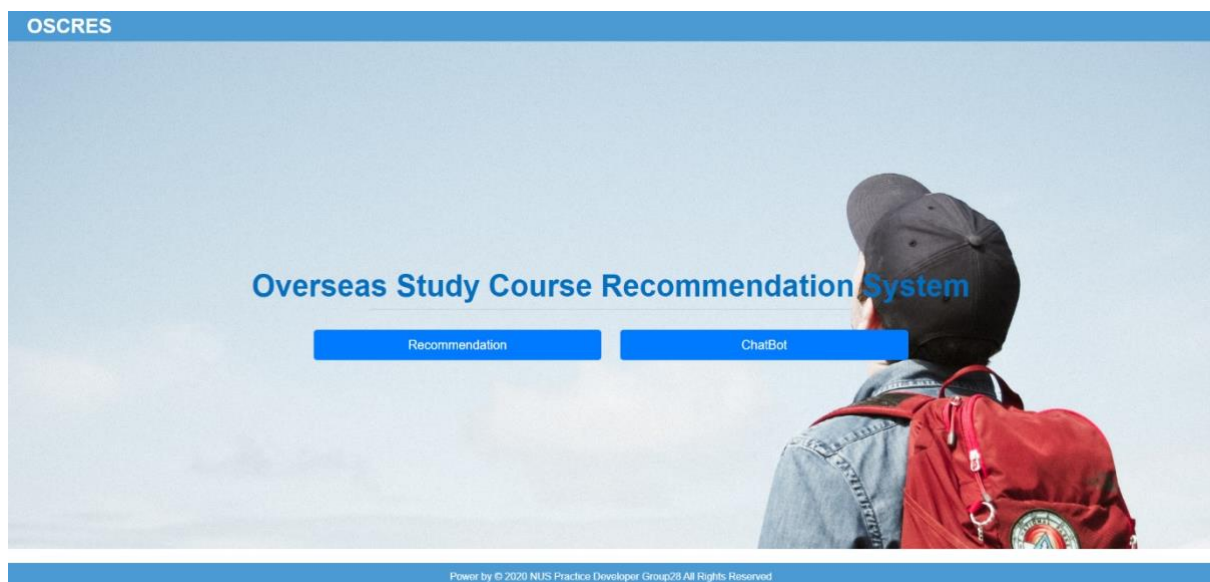


OSCRES INSTALLATION & USER GUIDE



Installation Guide

1. Software/Pre-Requisites

Web Browsers

- Google Chrome 88 or
- Edge 44 or
- Firefox 72

Python -- see section 3

Database --see section 4

Google Dialogflow -- see section 5

2. Project Setup

Clone the project repo

git clone "https://github.com/NormanLYJ/OSCRES.git" oscres

3. Python dependencies

We highly recommend you use Anaconda for python and its dependencies.

3.1 install [Anaconda](#) based on your OS version

- Verify python by entering python in command line, if you see a response from a python interpreter, means installation is success.

python -V

3.2 Pip – if you have installed Python >= 3.4 or Anaconda, you can ***skip*** this section.

- Download get-pip.py to a folder on your computer.
- Open a command prompt/terminal and navigate to the folder containing get-pip.py.
- Run the following command.

python get-pip.py

3.3. install python library dependencies:

conda install django

pip install django

conda install mysqlclient

pip install google-api-core

pip install dialogflow

pip install pandas

3.4. install pyknow:

- clone the pyknow repo:

git clone "https://github.com/buguroo/pyknow.git" pyknow

- go to the created project directory called pyknow and run

pip install .

4. Database Setup

4.1 install [mysql](#) with latest version

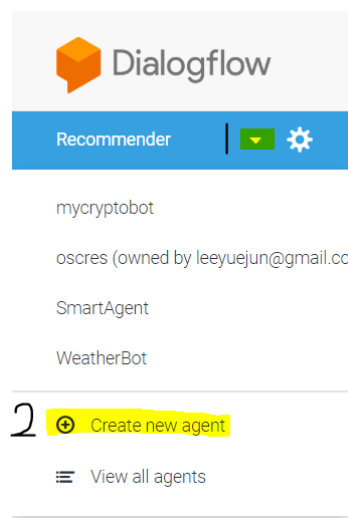
- make sure legacy password authentication is used, and default port (3306) is used.
- run below command if you encounter (**Unable to load plugin 'cached_sha2_password'**)
`ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password BY 'newrootpassword';`

4.2 Database and table setup

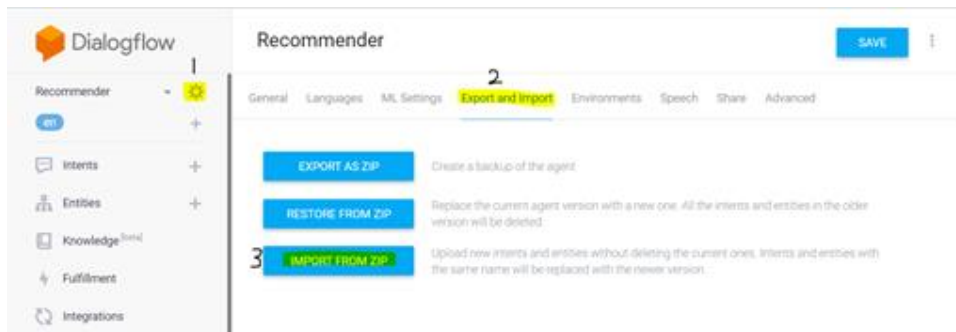
- In **`SystemCode/osgres/settings.py`**, in the **`DATABASES`** section, modify the **`USER`** and **`PASSWORD`** based on what you have created in 4.1.
- connect to the mysql database and run the content in **`database_creation.sql`** .This will create a database instance.
- in the **`SystemCode/table_load.py`** file, modify the **`username`** and **`password`** based on what you have created in 4.1.
- run below python files in sequence (under the project root directory):
`python SystemCode/manage.py makemigrations`
`python SystemCode/manage.py migrate`
`python SystemCode/table_load.py`

5. Google Dialogflow Setup

5.1. Login to Google Dialogflow and create new agent.

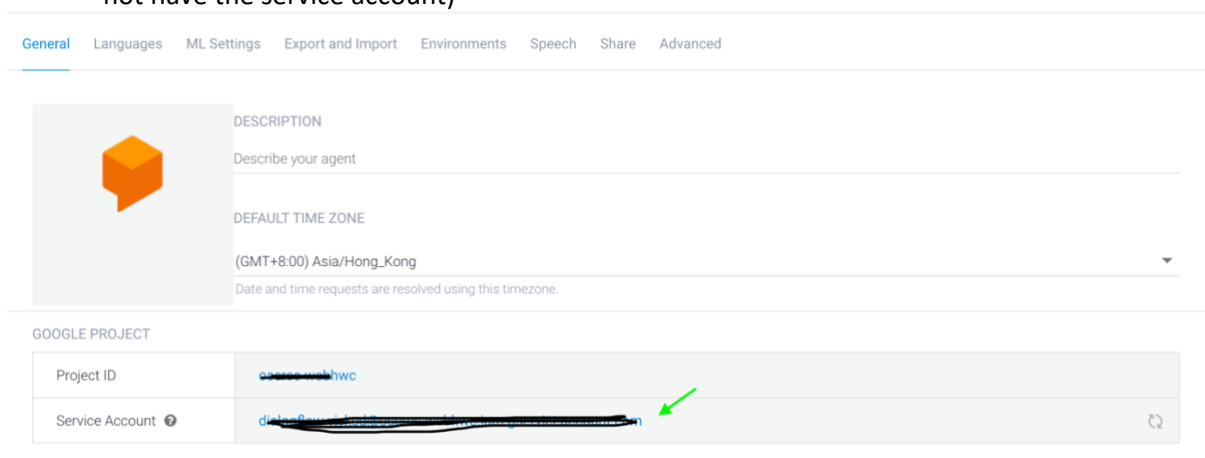


5.2 import the zip file **`dialogflow_objects.zip`** into your newly created Google Dialogflow project.

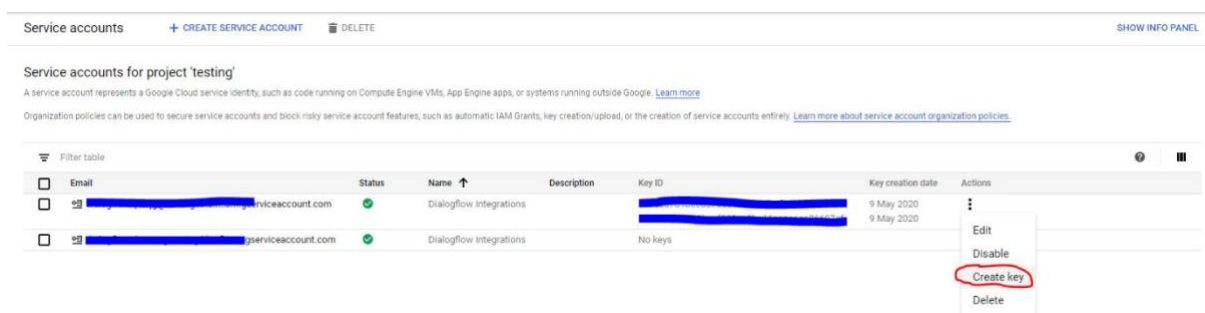


5.3. generate a json key file in the Google Dialogflow project page:

- Go to the project settings page
- Under **General** tab, click on the Service Account Link (click “+” button at right side if you do not have the service account)



- Click the 3 dots, then generate key file



- rename the generated file as **project_key.json**, put it under **/SystemCode** folder

5.4. change the **DIALOGFLOW_PROJECT_ID** value inside **/SystemCode/dialogflow_client.py** file to your actual Dialogflow project ID

6. Run the application

Run the application by executing below command in the project root directory

python SystemCode/manage.py runserver 0.0.0.0:8000

then you can explore the user interface at

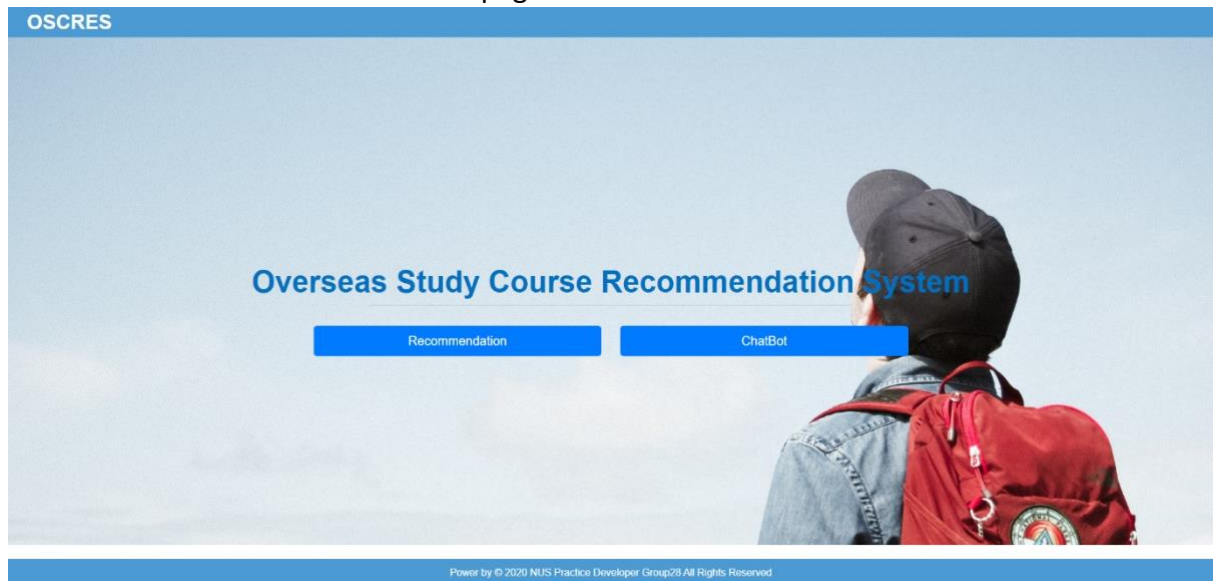
<http://localhost:8000/> or

<http://127.0.0.1:8000/>

Please refer to next page for User guide

User Guide

You should be able to see the home page like below:



There are two sub-system in this application:

1. Recommendation System

Students can choose any options base on their own conditions in this system.

Section 1: Choose your prefer location or leave blank.

Note: Current system only supports three regions (ANZ, UK/Europe, United States)

Section 2: indicate your university preferences.

Section 3: Indicate your English test result.

Section 4: indicate your high school tests.

University Course Recommendation Form

A. Do you have any prefer location for university?

Region:

UK/Europe

Country:

United Kingdom

B. Please indicate your university preferences below:

*Based on QS World University Rankings

1. Academic Reputation Ranking

☐ High ☒ Medium ☐ Low ☐ No Preference

2. Employer Reputation Ranking

☐ High ☐ Medium ☒ Low ☐ No Preference

3. Faculty Student Ranking

☐ High ☒ Medium ☐ Low ☐ No Preference

4. International Faculty Ranking

☐ High ☐ Medium ☒ Low ☐ No Preference

5. International Student Ranking

☐ High ☒ Medium ☐ Low ☐ No Preference

6. Citation Ranking

☐ High ☐ Medium ☒ Low ☐ No Preference

7. International Student Percentage

☐ High ☐ Medium ☒ Low ☐ No Preference

Power by © 2020 NUS Practice Developer Group28 All Rights Reserved

After you click “**Get My Course Match**” button on below in the page, matched results will be displayed. You can tun your options by clicking “Back” button to restart the process.

The system will recommend the best university based on your profile and best field of study based on you high school scores.

Dear Student, base on the your preference, you are suitable for:

Computer Science & Information Systems

Please check out the recommended universities:

[Matched All preference - AUCKLAND UNIVERSITY OF TECHNOLOGY](#)[Matched All preference - MASSEY UNIVERSITY](#)[Matched All preference - MONASH UNIVERSITY](#)

Back

ChatBot

Click link for more details of university.

Dear Student, base on the your preference, you are suitable for:

Computer Science & Information Systems

Please checkout the recommended universities:

Matched All preference - AUCKLAND UNIVERSITY OF TECHNOLOGY

Region	City	Population Size	Academic Reputation Rank	Faculty Student Rank	International Faculty Rank	International Student Rank
ANZ	Auckland	L	499	600	61	23

Cost of Living Index	International Student Percentage	Minimum IELTS	Minimum TOEFL	Offer Work Study Program	Average Tuition Fee (in local currency)
78.06	0.42	6.0	70	Yes	33334

Matched All preference - MASSEY UNIVERSITY

Matched All preference - MONASH UNIVERSITY

Back

If the system is not able to make recommendation on the field of study (eg, if you do not have the high school scores), there will not a study field recommended.

Dear Student, base on the your preference, you are suitable for:

Unable to recommend field of study based on your given high school scorings

But, you can still checkout the recommended universities:

Matched Minimum TOEFL/IELTS Entry Requirement : UNIVERSITY OF BRISTOL

Matched Minimum TOEFL/IELTS Entry Requirement : UNIVERSITY OF OSLO

Matched Minimum TOEFL/IELTS Entry Requirement : CHALMERS UNIVERSITY OF TECHNOLOGY

Back

By clicking the name of university to get more details.

Dear Student, base on the your preference, you are suitable for:

Unable to recommend field of study based on your given high school scorings

But, you can still checkout the recommended universities:

Matched All preference: AUCKLAND UNIVERSITY OF TECHNOLOGY

Region	City	Population Size	Academic Reputation Rank	Faculty Student Rank	International Faculty Rank	International Student Rank
ANZ	Auckland	1	489	600	61	23

Cost of Living Index	International Student Percentage	Minimum IELTS	Minimum TOEFL	Offer Work Study Program	Average Tuition Fee (in local currency)
76.06	0.42	6.0	70	Yes	33334

Matched All preference: MASSEY UNIVERSITY

Matched All preference: MONASH UNIVERSITY

Back

ChatBot

2. Chatbot System

This system is mainly used by students to ask questions that he/she is interested in and to help students to narrow down the search scope before the recommendation.

Course Chatbot

Welcome to course chatbot, please enter your question.

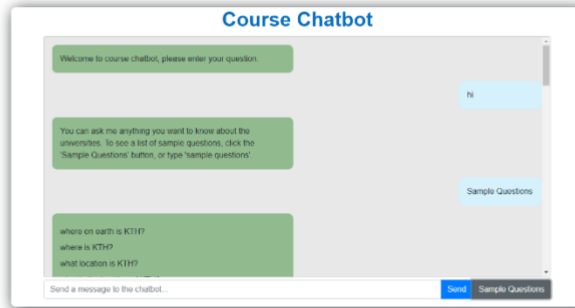
Send a message to the chatbot...

Send Sample Questions

Recommendation

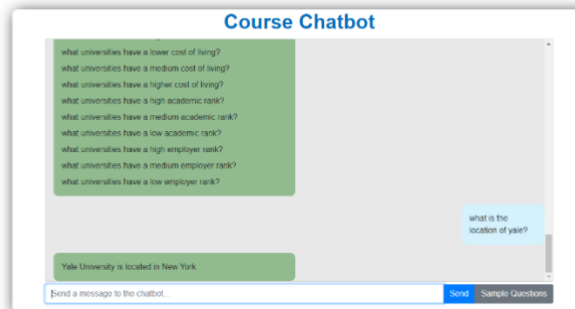
If you do not know which question should ask. You can click the **Sample Questions** button or type "sample questions" as question. Chatbot system will list out all sample questions which pre-defined in dialog-flow for your reference.

You can modify the question's subject accordingly.



Recommendation

Ask questions.



Recommendation

---end of the guide---