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In [3]: #Japanese Email LLM, Chain, Translation, Summary V02

import pandas as pd

'''
Task: Construct a chain that will take in a text or string that is a customer e-mail.

1. Detect the language the e-mail is written in
2. Translate the e-mail from detected language to English
3. Return a summary of the translated e-mail
4. Return a summary of the summary
'''

#spanish_email = open('spanishcustomeremail.txt').read()
#print(spanish_email)

japanese_email = open('Japanese_Email.txt').read()
print(japanese_email)

from langchain.chat_models import ChatOpenAI
from langchain.prompts import ChatPromptTemplate
from langchain.chains import LLMChain, SequentialChain
import os
os.environ['OPENAI_API_KEY'] = 'sk-MYbRnJwYKv5iQB5RIIRyT3BlbkFJXu6OblkSQUOY2jv6Uy6'

def translate_and_summarize(email):

    llm = ChatOpenAI()
    #Detect the Language
    template1 = "Return the language this email is written in:\n{email}\nONLY return the label it was written in."
    prompt1 = ChatPromptTemplate.from_template(template1)
    chain1 = LLMChain(llm=llm, prompt=prompt1, output_key = "language")

    #Translate
    template2 = "Translate this e-mail from {language} to English:\n" +email
    prompt2 = ChatPromptTemplate.from_template(template2)
    chain2 = LLMChain(llm=llm, prompt=prompt2, output_key = 'translated_email')

    #Summary
    template3 = "Create a short summary of this email: \n{translated_email}"
    prompt3 = ChatPromptTemplate.from_template(template3)
    chain3 = LLMChain(llm=llm,prompt=prompt3, output_key = 'summary')

    #Summarize the summary
    template4 = "Create a short summary of the summary: \n{summary}"
    prompt4 = ChatPromptTemplate.from_template(template4)
    chain4 = LLMChain(llm=llm,prompt=prompt3, output_key = 'summary02')

    #Summarize the second summary
    template5 = "Create a short summary of summary02: \n{summary02}"
    prompt5 = ChatPromptTemplate.from_template(template5)
    chain5 = LLMChain(llm=llm,prompt=prompt3, output_key = 'summary03')

    seq_chain = SequentialChain(chains = [chain1, chain2, chain3, chain4, chain5],
                                input_variables=['email'],
                                output_variables = ['language', 'translated_email', 'summary', 'summary02', 'summary03'],
                                verbose = True)

    return seq_chain(email)

#Example Useage and Outputs
result = translate_and_summarize(japanese_email)

result.keys()

result['language']
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在外選挙人登録申請（来館が困難な方に対する特例措置について）

1 本年4月1日から、遠隔地にお住まいの方等、一定の条件を満たす方に対して、在外選挙人登録申請の際の本人出頭を免除する特例措置を開始します。遠隔地にお住まいであることの他、在外選挙人証登録申請のために来館できない特別な事情がある方は、事前に当館までご相談ください。一定の条件を満たす場合には、ビデオ通話による本人確認及び事前に送付又は託送された提出書類の原本確認を行うことで在外選挙人登録申請ができます。

2 本件特例措置の詳細につきましては、当館ホームページをご覧ください
https://www.houston.us.emb-japan.go.jp/itpr_ja/11_000001_00351.html

3 今夏には、参議院議員通常選挙が予定されています。在外選挙人登録には、通常2か月ほど（注）かかりますので、早めの登録申請をお勧めいたします。

*このメールの送信アドレスは送信専用です。
*このメールは在留届・メールマガジン・たびレジに登録されたメールアドレスに自動的に配信されています。
*「たびレジ」簡易登録をした方でメールの配信を停止したい方は、以下のURLから停止手続きをお願いします。
URL：https://www.ezairyu.mofa.go.jp/tabireg/simple/delete
*災害や騒乱等が発生した際、ご家族、ご友人、同僚を守るため、一人でも多くの方に安全対策に関する情報が届くよう、在留届（3か月以上の滞在）の届出、又はたびレジ（3か月未満の滞在）の登録を、お知り合いの方や出張者・旅行者にご案内いただけますようお願いいたします。

> **Entering new SequentialChain chain...**

> **Finished chain.**
'Japanese'

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Out[3]: 'Japanese'

In [4]: result['translated_email']
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Out[4]: "Subject: Special Measures for Foreign Resident Voter Registration (Regarding Exceptional Measures for Those Unable to Visit)\n\n1. Starting from April 1st of this year, we will begin implementing special measures to exempt certain individuals who meet certain conditions, such as those residing in remote areas, from the requirement of personal appearance when applying for foreign resident voter registration. If you reside in a remote area and have special circumstances that prevent you from visiting our office for the registration of your foreign resident voter card, please consult with us in advance. If you meet the specified conditions, you can apply for foreign resident voter registration through video calls for identity verification and confirmation of the original documents that have been sent or delivered in advance.\n\n2. For more details regarding these special measures, please visit our embassy's website at:\nhttps://www.houston.us.emb-japan.go.jp/itpr_en/11_000001_00351.html\n\n3. The regular election for members of the House of Councillors is scheduled for this summer. The process of foreign resident voter registration usually takes about two months (note), so we recommend applying for registration as early as possible.\n\n*This email address is for sending purposes only.\n*This email is automatically distributed to the email addresses registered for resident notification, email newsletters, and Tabi-Regi.\n*If you have registered for Tabi-Regi and would like to stop receiving emails, please follow the URL below for the cancellation process:\nURL: https://www.ezairyu.mofa.go.jp/tabireg/simple/delete\n*In the event of a disaster or disturbance, in order to protect your family, friends, and colleagues, we kindly ask that you provide information on safety measures to as many people as possible by either submitting a resident notification (for stays of three months or longer) or registering for Tabi-Regi (for stays of less than three months) and informing acquaintances, business travelers, and tourists."
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In [10]: print(result['summary'], len(result['summary']))

The email announces special measures for foreign residents who are unable to visit the office for voter registration. These measures, starting from April 1st, exempt individuals in remote areas from the requirement of personal appearance. They can apply for registration through video calls for identity verification and confirmation of documents. The email also provides a link to the embassy's website for more details. It mentions that the regular election for members of the House of Councillors is scheduled for the summer and recommends early registration. Finally, the email includes information on how to stop receiving emails and encourages recipients to share safety measures during disasters or disturbances. 719
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In [11]: print(result['summary02'], len(result['summary02']))

This email informs recipients about special measures for foreign residents who are unable to visit the office for voter registration. Individuals residing in remote areas or with special circumstances can apply for voter registration through video calls. The email also provides a link to the embassy's website for more information on the special measures. It mentions that the regular election for members of the House of Councillors is scheduled for the summer and encourages early registration. The email also includes information on how to unsubscribe from receiving emails and urges recipients to share safety measures with others in the event of a disaster or disturbance. 678
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In [9]: print(result['summary03'], len(result['summary03']))

This email announces special measures for foreign residents who are unable to visit the office for voter registration. Starting from April 1st, certain individuals residing in remote areas can apply for foreign resident voter registration through video calls for identity verification. More details can be found on the embassy's website. The regular election for members of the House of Councillors is scheduled for the summer, so early registration is recommended. The email also includes information on how to stop receiving emails and encourages recipients to share safety measures with others in the event of a disaster or disturbance. 639
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