

Ejercicio2 FastAPI

En este documento se cubre el mínimo del segundo ejercicio sin incluir la parte opcional del Despliegue del script en GCP Cloud Run.

Se han creado 3 scripts .py con la siguiente información:

Function.py: Incluye las funciones comentadas que después se usarán en 5 métodos

- Analyze_sentiment llama a un transformer de Hugging Face que resuelve un problema de clasificación de sentimiento
- Translate_to_french llama a un transformer de Hugging Face que resuelve un problema de NLP de traducción de inglés al Francés
- Square_number calcula el cuadrado de un número
- Reverse_text devuelve una cadena de caracteres invertida
- Text_length calcula la longitud de una cadena de caracteres

Main.py: Incluye 6 métodos que llaman a las funciones mencionadas anteriormente. Sin especificar una ruta, se lanza un mensaje de bienvenida. Después el resto de métodos llama a cada una de las funciones de forma independiente.

App.py: Utiliza también el modulo de funciones pero se carga una interfaz de streamlit

Para la activación de FastAPI se usa el comando `fastapi run main.py`

Para la activación de Streamlit se usa el comando `streamlit run app.py`

A continuación, capturas de pantalla justificando el segundo ejercicio.

1. Captura de la pantalla docs con al menos 5 modulos.



2. Captura de cada una de los modulos con la respuesta dentro de docs.

default

GET / Read Root

Parameters

No parameters

Execute Clear

Responses

Curl

```
curl -X 'GET' \
  'http://127.0.0.1:8000/' \
  -H 'accept: application/json'
```

Request URL

http://127.0.0.1:8000/

Server response

Code Details

200

Response body

```
{
  "message": "Bienvenido a la API modularizada con FastAPI y Hugging Face"
}
```

Response headers

```
content-length: 73
content-type: application/json
date: Fri, 13 Dec 2024 16:44:08 GMT
server: uvicorn
```

Responses

Code	Description	Links
200	Successful Response	No links

Media type

application/json

Controls Accept header

Example Value Schema

```
"string"
```

GET

/sentiment/{text}

Get Sentiment

Parameters

Cancel

Name	Description
text * required string (path)	<div>I love programming in python</div>

Execute

Clear

Responses

Curl

curl -X 'GET' \'
'http://127.0.0.1:8000/sentiment/I%20love%20programming%20in%20python' \
-H 'accept: application/json'

Request URL

http://127.0.0.1:8000/sentiment/I%20love%20programming%20in%20python

Server response

Code	Details
200	<div>Response body</div> <div><pre>{ "text": "I love programming in python", "sentiment": [{ "label": "POSITIVE", "score": 0.9997096657752991 }] }</pre></div> <div>Response headers</div> <div><pre>content-length: 100 content-type: application/json date: Fri, 13 Dec 2024 16:44:42 GMT server: uvicorn</pre></div>

Responses

Code	Description	Links
200	<div>Successful Response</div> <div>Media type application/json</div> <div>Controls Accept header.</div> <div>Example Value Schema</div> <div>"string"</div>	No links
422	<div>Validation Error</div> <div>Media type application/json</div> <div>Example Value Schema</div> <div><pre>{ "detail": [{ "loc": ["string", 0], "msg": "string", "type": "string" }] }</pre></div>	No links

GET

/translate/{text}

Get Translation

⌵

Parameters

Cancel

Name	Description
text <small>* required</small> string (path)	<div>My name is Ramón and i am very handsome</div>

Execute

Clear

Responses

Curl

```
curl -X 'GET' \
  'http://127.0.0.1:8000/translate/My%20name%20is%20Ram%C3%B3n%20and%20I%20am%20very%20handsome' \
  -H 'accept: application/json'
```

Request URL

```
http://127.0.0.1:8000/translate/My%20name%20is%20Ram%C3%B3n%20and%20I%20am%20very%20handsome
```

Server response

Code	Details
200	<div><div>Response body</div><div><pre>{ "text": "My name is Ramón and i am very handsome", "translation": [{ "translation_text": "Mon nom est Ramón et je suis très joli." }] }</pre></div><div><div>Download</div></div></div> <div><div>Response headers</div><div><pre>content-length: 132 content-type: application/json date: Fri, 13 Dec 2024 16:45:49 GMT server: uvicorn</pre></div></div>

Responses

Code	Description	Links
200	<div>Successful Response</div> <div><div>Media type</div><div>application/json</div></div> <div>Controls Accept header.</div> <div><div>Example Value</div><div>Schema</div></div> <div><pre>"string"</pre></div>	

 No links || 422 | Validation Error Media type application/json Example Value Schema ``` { "detail": [{ "loc": ["string", 0], "msg": "string", "type": "string" }] } ``` |

 No links |

GET

/square/{number}Get Square

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Parameters

Cancel

Name	Description
number required	
integer	13
(path)	

ExecuteClear

Responses

Curl

curl -X 'GET' \n'http://127.0.0.1:8080/square/13' \n-H 'accept: application/json'

Request URL

http://127.0.0.1:8080/square/13

Server response

Code	Details
200	<div>Response body<div>{\n "number": 13,\n "square": 169\n}</div><div>Download</div></div> <div>Response headers<div>content-length: 26\ncontent-type: application/json\ndate: Fri, 13 Dec 2024 16:46:23 GMT\nserver: uvicorn</div></div>

Responses

Code	Description	Links
200	<div>Successful Response</div> <div>Media type<div>application/json</div></div> <div>Controls Accept header.</div> <div>Example Value Schema</div> <div>"string"</div>	No links
422	<div>Validation Error</div> <div>Media type<div>application/json</div></div> <div>Example Value Schema</div> <div>{\n "detail": [\n {\n "loc": [\n "string",\n 0\n],\n "msg": "string",\n "type": "string"\n }\n]\n}</div>	No links

GET

/reverse/{text}

Get Reversed

⌵

GET

/reverse/{text} Get Reversed

Parameters

Cancel

Name	Description
text <small>required</small>	
string (path)	Esto no es un palindromo

Execute

Clear

Responses

Curl

```
curl -X 'GET' \
  'http://127.0.0.1:8000/reverse/Esto%20no%20es%20un%20palindromo' \
  -H 'accept: application/json'
```

Request URL

http://127.0.0.1:8000/reverse/Esto%20no%20es%20un%20palindromo

Server response

Code	Details
200	<div><div>Response body</div><div><pre>{ "original": "Esto no es un palindromo", "reversed": "omordnilap nu se on otse" }</pre></div><div>Download</div></div> <div><div>Response headers</div><div><pre>content-length: 77 content-type: application/json date: Fri, 13 Dec 2024 16:48:13 GMT server: uvicorn</pre></div></div>

Responses

Code	Description	Links
200	<div>Successful Response</div> <div><div>Media type</div><div>application/json</div><div>Controls Accept header.</div><div>Example Value Schema</div><div>"string"</div></div> <div>No links</div>	
422	<div>Validation Error</div> <div><div>Media type</div><div>application/json</div><div>Example Value Schema</div><div><pre>{ "detail": [{ "loc": ["string", 0], "msg": "string", "type": "string" }] }</pre></div><div>No links</div></div>	

GET

/length/{text}

Get Length

⌵

Parameters

Cancel

Name	Description
text * required string (path)	En un tweet caben 260 caracteres

Execute

Clear

Responses

Curl

```
curl -X 'GET' \
  http://127.0.0.1:8000/length/En%20un%20tweet%20cab%20en%20260%20caracteres' \
  -H 'accept: application/json'
```

Request URL

http://127.0.0.1:8000/length/En%20un%20tweet%20cab%20en%20260%20caracteres

Server response

Code	Details
200	<div>Response body</div> <div><pre>{ "text": "En un tweet caben 260 caracteres", "length": 32 }</pre></div> <div>Response headers</div> <div><pre>content-length: 55 content-type: application/json date: Fri, 13 Dec 2024 16:49:23 GMT server: uvicorn</pre></div>

Responses

Code	Description	Links
200	<div>Successful Response</div> <div>Media type</div> <div>application/json</div> <div>Controls Accept header</div> <div>Example Value Schema</div> <div>"string"</div>	No links
422	<div>Validation Error</div> <div>Media type</div> <div>application/json</div> <div>Example Value Schema</div> <div><pre>{ "detail": [{ "loc": ["string", 0], "msg": "string", "type": "string" }] }</pre></div>	No links

requirements.txt Mmain.py Xfunction.py Mapp.py U

practica-despliegue-algoritmos > Ejercicio2 FastAPI > main.py > get_length

```
1 from fastapi import FastAPI
2 from function import (analyze_sentiment, translate_to_french, square_number, reverse_text, text_length)
3
4 app = FastAPI()
5
6 @app.get("/")
7 def read_root():
8     return {"message": "Bienvenido a la API modularizada con FastAPI y Hugging Face"}
9
10 @app.get("/sentiment/{text}")
11 def get_sentiment(text: str):
12     return analyze_sentiment(text)
13
14 @app.get("/translate/{text}")
15 def get_translation(text: str):
16     return translate_to_french(text)
17
18 @app.get("/square/{number}")
19 def get_square(number: int):
20     return square_number(number)
21
22 @app.get("/reverse/{text}")
23 def get_reversed(text: str):
24     return reverse_text(text)
25
26 @app.get("/length/{text}")
27 def get_length(text: str):
28     return text_length(text)
```

PROBLEMS OUTPUT PORTS DEBUG CONSOLE TERMINAL AZURE

PS C:\Users\ramon.laborda\Downloads\practica-despliegue-algoritmos\Ejercicio2 FastAPI> fastapi run main.py

FastAPI Starting production server

Searching for package file structure from directories with `__init__.py` files
No model was supplied, defaulted to distilbert-base-uncased-finetuned-sst-2-english and revision af0f99b (<https://huggingface.co/distilbert-base-uncased-finetuned-sst-2-english>)
Using a pipeline without specifying a model name and revision in production is not recommended.
C:\Users\ramon.laborda\AppData\Local\anaconda3\lib\site-packages\huggingface_hub\file_download.py:797: FutureWarning: `resume_from_checkpoint` is deprecated. Use `resume_from_checkpoint=True` instead.
warnings.warn(
Xformers is not installed correctly. If you want to use memory_efficient_attention to accelerate training use the following command:
pip install xformers.
No model was supplied, defaulted to t5-base and revision 686f1db (<https://huggingface.co/t5-base>).
Using a pipeline without specifying a model name and revision in production is not recommended.
C:\Users\ramon.laborda\AppData\Local\anaconda3\lib\site-packages\transformers\models\t5\tokenization_t5_fast.py:155: FutureWarning: `tokenizer_kwargs` is deprecated. Use `tokenizer_kwargs={'truncation': True}` instead.
For now, this behavior is kept to avoid breaking backwards compatibility when padding/encoding with `truncation is True`.
- Be aware that you SHOULD NOT rely on t5-base automatically truncating your input to 512 when padding/encoding.
- If you want to encode/pad to sequences longer than 512 you can either instantiate this tokenizer with `model_max_length` or
- To avoid this warning, please instantiate this tokenizer with `model_max_length` set to your preferred value.
warnings.warn(
Importing from C:\Users\ramon.laborda\Downloads\practica-despliegue-algoritmos\Ejercicio2 FastAPI

module main.py

code Importing the FastAPI app object from the module with the following code:

from main import app

app Using import string: main:app

server Server started at <http://0.0.0.0:8000>
Documentation at <http://0.0.0.0:8000/docs>

Logs:

```
INFO Started server process [7612]
INFO Waiting for application startup.
INFO Application startup complete.
INFO Uvicorn running on http://0.0.0.0:8000 (Press CTRL+C to quit)
INFO 127.0.0.1:51516 - "GET / HTTP/1.1" 200
INFO 127.0.0.1:51517 - "GET /docs HTTP/1.1" 200
INFO 127.0.0.1:51517 - "GET /openapi.json HTTP/1.1" 200
INFO 127.0.0.1:51522 - "GET / HTTP/1.1" 200
INFO 127.0.0.1:51634 - "GET /sentiment/I%20love%20programming%20in%20python HTTP/1.1" 200
INFO 127.0.0.1:51673 - "GET /translate/My%20name%20is%20Ram%C3%B3n%20and%20I%20am%20very%20handsome HTTP/1.1" 200
INFO 127.0.0.1:51707 - "GET /square/13 HTTP/1.1" 200
INFO 127.0.0.1:51792 - "GET /reverse/Esto%20no%20es%20un%20palindromo HTTP/1.1" 200
INFO 127.0.0.1:51838 - "GET /length/En%20un%20tweet%20caben%2060%20caracteres HTTP/1.1" 200
```


Bonus Streamlit

Menu principal de la app con streamlit



Método de análisis de sentimiento



Método de traducción al frances

Seleccione una funcionalidad

Traducción al Francés

Deploy

Streamlit y FastAPI

Traducción al Francés

Escribe algo en ingles:

My name is Ramón and ii am very handsome

Traducir

Texto Original: My name is Ramón and ii am very handsome

Traduccion: [{"translation_text": "Mon nom est Ramón et ii je suis très belle"}]

Método de cuadrado de un numero

Seleccione una funcionalidad

Cuadrado de un Numero

Deploy

Streamlit y FastAPI

Cuadrado de un Numero

Escribe un numero:

13.00

Calcular

Numero: 13.0

Cuadrado: 169.0

Método de invertir un texto

Seleccione una funcionalidad

Invertir Texto

Deploy

Streamlit y FastAPI

Invertir Texto

Escribe un texto:

Esto no es un palindromo

Invertir

Texto Original: Esto no es un palindromo

Texto Invertido: omordnilap nu se on otsE

Método de longitud de una cadena de caracteres

Seleccione una funcionalidad

Longitud de un Texto

Deploy

Streamlit y FastAPI

Longitud de un Texto

Escribe un texto:

En un tweet caben 260 caracteres

Calcular

Texto: En un tweet caben 260 caracteres

Longitud: 32