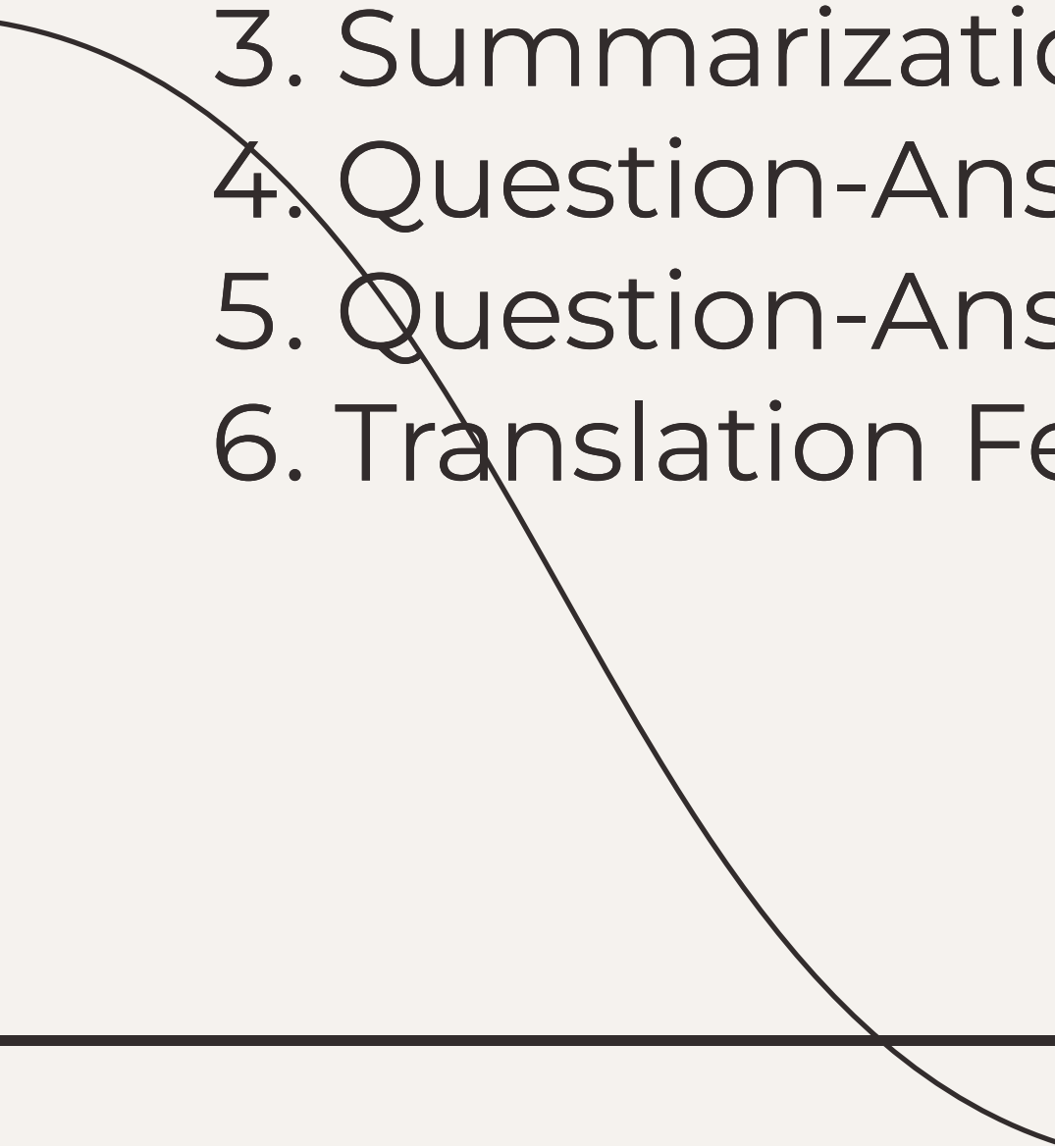




Revolutionizing Text Processing: Advanced OCR with Summarization, QA, and Translation Capabilities



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previous work



ai.py

```
pipe_ar = pipeline("question-answering",model='ZeyadAhmed/AraElectra-Arabic-SQuADv2-QA')  
pipe_en = pipeline("question-answering",model='deepset/roberta-base-squad2')
```

previous work

Select Language

☐ Arabic

☒ English

enter text

Python is a versatile programming language known for its simplicity and readability, making it ideal for beginners and experienced developers alike. It supports multiple programming paradigms, including procedural, object-oriented, and functional programming. Python's extensive libraries and frameworks, such as NumPy and Django, allow developers to delve into areas like web development, data analysis, and artificial intelligence, making it an ultimate choice for diverse projects.

enter question

What are some common use cases for Python in web development?

Clear

Submit

answer

data analysis, and artificial intelligence

previous work

Select Language

☒ Arabic ☐ English

enter text

بايثون هي لغة برمجة متعددة الاستخدامات معروفة ببساطتها وسهولة قراءتها، مما يجعلها مثالية للمبتدئين والمطورين ذوي الخبرة على حد سواء. وهو يدعم نماذج برمجة متعددة، بما في ذلك البرمجة الإجرائية والموجهة للكائنات والوظيفية. تسمح للمطورين بالتعمق في مجالات مثل تطوير الويب وتحليل NumPy و Django، الشاملة، مثل Python مكتبات وأطر عمل البيانات والذكاء الاصطناعي، مما يجعلها خيارًا نهائيًا للمشاريع المتنوعة.

enter question

في تطوير الويب؟ Python ما هي بعض حالات الاستخدام الشائعة لـ.

Clear

Submit

answer

وتحليل البيانات والذكاء الاصطناعي

What is OCR?



Optical Character Recognition (OCR) is the technology that enables the conversion of different types of documents, such as scanned paper documents and PDFs, into editable and searchable data. It plays a crucial role in digitizing information.

Summarization Techniques



```
# summarization model in english
summarizer = pipeline("summarization", model="facebook/bart-large-cnn")

def summarize(text):
    summary = summarizer(text, max_length=200, min_length=30, do_sample=False)
    return summary[0]['summary_text']
```

Question-Answering In English



```
ai.py

model_name = "deepset/roberta-base-squad2"

pipe_qa_en = pipeline('question-answering', model=model_name, tokenizer=model_name)

model = AutoModelForQuestionAnswering.from_pretrained(model_name)
tokenizer = AutoTokenizer.from_pretrained(model_name)

def question_answering(question, context):
    QA_input = {
        'question': question,
        'context': context,
    }
    res = pipe_qa_en(QA_input)
    return res['answer']
```


Question-Answering In Arabic

```
ai.py

from transformers import pipeline
# question-answering model in arabic
pipe_qa_ar = pipeline("question-answering", model="gp-tar4/QA_FineTuned")

def question_answering_ar(question, context):
    QA_input = {
        'question': question,
        'context': context,
    }
    res = pipe_qa_ar(QA_input)
    return res['answer']
```

Translation Features

ai.py

```
# translation english to arabic
pipe_to_arabic = pipeline("translation", model="Helsinki-NLP/opus-mt-en-ar")


def to_arabic(text, max_length=512):
    # Split the text into chunks if it is more than 512
    chunks = [text[i:i+max_length] for i in range(0, len(text), max_length)]

    translated_chunks = []
    for chunk in chunks:
        translated_chunk = pipe_to_arabic(chunk, max_length=max_length)[0]['translation_text']
        translated_chunks.append(translated_chunk)

    # Join the translated chunks
    return ' '.join(translated_chunks)
```

example of summrization

Upload Image



×

output Text

Input text:

Processed OCR text: Alfa Nar restaurant is located in the heart of the city of Dubai. The restaurant is open seven days a week and offers a range of dining options.

Flag

example of question_answering


Image and Text Processor

Upload an image and provide some text to generate a response.

Select Language

☐ Arabic

☒ English

 Upload Image

✕



The Penauin

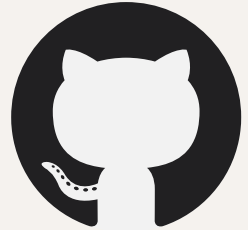
Answer Text

Input text: how long does it take underwater

the answer is : 10-15 minutes

Flag

Thanks!



https://github.com/khaled0625/ocr_summarization_and_question_answering-AI/tree/main



https://huggingface.co/spaces/khaled06/ocr_summarization_and_question_answering