

```
        if pattern:
            translated_pattern = translate_text(pattern)
            translated_patterns.append(translated_pattern)
        else:
            translated_patterns.append(None)
    translated_responses = []
    for response in intent['responses']:
        if response:
            translated_response = translate_text(response)
            translated_responses.append(translated_response)
        else:
            translated_responses.append(None)
    translated_intents.append({
        'tag': intent['tag'],
        'patterns': translated_patterns,
        'responses': translated_responses
    })

# Simpan dataset yang telah diterjemahkan ke dalam file JSON
translated_data = {'intents': translated_intents}
with open('dataset_percakapan.json', 'w') as file:
    json.dump(translated_data, file, ensure_ascii=False, indent=4)
```

colab.research.google.com/drive/1UFJwakYRWwu5Av7FISEdeYzkCOB02VzB#scrollTo=TVUnsXuAZq3

Sharing https://github.com to discord.com Stop sharing Share this tab instead

Untitled8.ipynb

File Edit Lihat Sisipkan Runtime Fitur Bantuan Semua perubahan telah disimpan

+ Kode + Teks

```
!pip install googletrans==4.0.0-rc1
```

Collecting googletrans==4.0.0-rc1
Using cached googletrans-4.0.0rc1.tar.gz (20 kB)
Preparing metadata (setup.py) ... done
Collecting httpx==0.13.3 (from googletrans==4.0.0-rc1)
Using cached httpx-0.13.3-py3-none-any.whl (55 kB)
Requirement already satisfied: certifi in /usr/local/lib/python3.10/dist-packages (from httpx==0.13.3->googletrans==4.0.0-rc1)
Collecting hstspreload (from httpx==0.13.3->googletrans==4.0.0-rc1)
Using cached hstspreload-2024.5.1-py3-none-any.whl (1.1 MB)
Requirement already satisfied: sniffio in /usr/local/lib/python3.10/dist-packages (from httpx==0.13.3->googletrans==4.0.0-rc1)
Collecting chardet==3.* (from httpx==0.13.3->googletrans==4.0.0-rc1)
Using cached chardet-3.0.4-py2.py3-none-any.whl (133 kB)
Collecting idna==2.* (from httpx==0.13.3->googletrans==4.0.0-rc1)
Using cached idna-2.10-py2.py3-none-any.whl (58 kB)
Collecting rfc3986<2,>=1.3 (from httpx==0.13.3->googletrans==4.0.0-rc1)
Using cached rfc3986-1.5.0-py2.py3-none-any.whl (31 kB)
Collecting httpcore==0.9.* (from httpx==0.13.3->googletrans==4.0.0-rc1)
Using cached httpcore-0.9.1-py3-none-any.whl (42 kB)
Collecting h11<0.10,>=0.8 (from httpcore==0.9.*->httpx==0.13.3->googletrans==4.0.0-rc1)
Using cached h11-0.9.0-py2.py3-none-any.whl (53 kB)
Collecting h2==3.* (from httpcore==0.9.*->httpx==0.13.3->googletrans==4.0.0-rc1)
Using cached h2-3.2.0-py2.py3-none-any.whl (65 kB)
Collecting hyperframe<6,>=5.2.0 (from h2==3.*->httpcore==0.9.*->httpx==0.13.3->googletrans==4.0.0-rc1)
Using cached hyperframe-5.2.0-py2.py3-none-any.whl (12 kB)
Collecting hpack4,>=3.0 (from h2==3.*->httpcore==0.9.*->httpx==0.13.3->googletrans==4.0.0-rc1)
Using cached hpack-3.0.0-py2.py3-none-any.whl (38 kB)
Building wheels for collected packages: googletrans
Building wheel for googletrans (setup.py) ... done
Created wheel for googletrans: filename=googletrans-4.0.0rc1-py3-none-any.whl size=1

dataset_percakapan.json X dataset_conversation.json

```
1 {  
2   "intents": [  
3     {  
4       "tag": "greeting",  
5       "patterns": [  
6         "Hai",  
7         "Hai",  
8         "Apakah ada orang di sana?",  
9         "Hai, yang di sana",  
10        "Halo",  
11        "Halo",  
12        "Howdy",  
13        "Halo",  
14        "Halo",  
15        "Konnichiwa",  
16        "Tag Guten",  
17        "Ola"  
18      ],  
19      "responses": [  
20        "Halo yang disana.Katakan padaku bagaimana perasaanmu hari ini?",  
21        "Hai, yang di sana.Apa yang membawamu ke sini hari ini?",  
22        "Hai, yang di sana.Bagaimana perasaan Anda hari ini?",  
23        "Senang bertemu denganmu.Bagaimana perasaan Anda saat ini?",  
24        "Halo yang disana.Senang melihat Anda kembali.Apa yang terjadi di dunia Anda"  
25      ]  
26    },  
27  ]  
}
```

Terhubung ke backend Google Compute Engine Python 3

{x}



```
[ ] from google.colab import drive
    drive.mount('/content/drive')
```

Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.mount("/content/drive", force_remount=True).



```
import json
from googletrans import Translator

# Fungsi untuk menerjemahkan teks menggunakan Google Translate API
def translate_text(text):
    translator = Translator()
    translation = translator.translate(text, src='en', dest='id')
    return translation.text

# Baca dataset dari file JSON
with open('/content/dataset_conversation.json', 'r') as file:
    data = json.load(file)

# Menerjemahkan teks dalam dataset
translated_intents = []
for intent in data['intents']:
    translated_patterns = []
    for pattern in intent['patterns']:
        if pattern:
            translated_pattern = translate_text(pattern)
            translated_patterns.append(translated_pattern)
```



```
import json
import numpy as np
import random
import nltk
from nltk.stem import WordNetLemmatizer
from sklearn.preprocessing import LabelEncoder
nltk.download('punkt')
nltk.download('wordnet')
nltk.download('omw-1.4')

# Load dataset
with open('/content/dataset_indonesiaa.json') as file:
    data = json.load(file)

# Inisialisasi lemmatizer dan label encoder
lemmatizer = WordNetLemmatizer()
label_encoder = LabelEncoder()

# Persiapan data
patterns = []
tags = []
responses = {}

for intent in data['intents']:
    for pattern in intent['patterns']:
        word_list = nltk.word_tokenize(pattern)
        patterns.append(word_list)
        tags.append(intent['tag'])
        responses[intent['tag']] = intent['responses']
```

```
[ ] # Lematisasi dan encoding
lemmatized_patterns = [[lemmatizer.lemmatize(word.lower()) for word in pattern] for pattern in patterns]
tag_labels = label_encoder.fit_transform(tags)

# Membuat vocabulary
vocabulary = sorted(set(word for pattern in lemmatized_patterns for word in pattern))
vocab_size = len(vocabulary)
output_size = len(set(tags))

# One-hot encoding
def one_hot_encode(words, vocab):
    encoding = [0] * len(vocab)
    for word in words:
        if word in vocab:
            encoding[vocab.index(word)] = 1
    return encoding

# Encode patterns
encoded_patterns = np.array([one_hot_encode(pattern, vocabulary) for pattern in lemmatized_patterns])
encoded_tags = np.array(tag_labels)
```

[nltk_data] Downloading package punkt to /root/nltk_data...
[nltk_data] Unzipping tokenizers/punkt.zip.
[nltk_data] Downloading package wordnet to /root/nltk_data...
[nltk_data] Downloading package omw-1.4 to /root/nltk_data...

```
import tensorflow as tf
from tensorflow.keras.models import Sequential
from tensorflow.keras.layers import Dense, Dropout
```



```
#Membangun model
model = Sequential([
    Dense(128, input_shape=(vocab_size,), activation='relu'),
    Dropout(0.5),
    Dense(64, activation='relu'),
    Dropout(0.5),
    Dense(output_size, activation='softmax')
])

#Kompilasi model
model.compile(optimizer='adam', loss='sparse_categorical_crossentropy', metrics=['accuracy'])

#Melatih model
model.fit(encoded_patterns, encoded_tags, epochs=200, batch_size=5, verbose=1)

#Simpan model dalam format HDF5
model.save('model_chatbot.h5')

#Unduh file menggunakan modul files dari google.colab
from google.colab import files
files.download('model_chatbot.h5')
```

```
Epoch 174/200
71/71 [=====] - 0s 3ms/step - loss: 0.3912 - accuracy: 0.8693
Epoch 175/200
71/71 [=====] - 0s 3ms/step - loss: 0.3489 - accuracy: 0.8636
Epoch 176/200
71/71 [=====] - 0s 3ms/step - loss: 0.3924 - accuracy: 0.8665
Epoch 177/200
71/71 [=====] - 0s 4ms/step - loss: 0.4909 - accuracy: 0.8352
Epoch 178/200
71/71 [=====] - 0s 3ms/step - loss: 0.3418 - accuracy: 0.8722
Epoch 179/200
```

```
+ Kode + Teks
71/71 [=====] - 0s 3ms/step - loss: 0.3835 - accuracy: 0.8665
Epoch 183/200
71/71 [=====] - 0s 3ms/step - loss: 0.3917 - accuracy: 0.8778
Epoch 184/200
71/71 [=====] - 0s 3ms/step - loss: 0.3568 - accuracy: 0.8693
Epoch 185/200
71/71 [=====] - 0s 3ms/step - loss: 0.3135 - accuracy: 0.8807
Epoch 186/200
71/71 [=====] - 0s 3ms/step - loss: 0.3087 - accuracy: 0.8949
Epoch 187/200
71/71 [=====] - 0s 3ms/step - loss: 0.3377 - accuracy: 0.8835
Epoch 188/200
71/71 [=====] - 0s 3ms/step - loss: 0.3648 - accuracy: 0.8665
Epoch 189/200
71/71 [=====] - 0s 2ms/step - loss: 0.3487 - accuracy: 0.8864
Epoch 190/200
71/71 [=====] - 0s 3ms/step - loss: 0.3636 - accuracy: 0.8722
Epoch 191/200
71/71 [=====] - 0s 2ms/step - loss: 0.3566 - accuracy: 0.8778
Epoch 192/200
71/71 [=====] - 0s 2ms/step - loss: 0.3145 - accuracy: 0.8949
Epoch 193/200
71/71 [=====] - 0s 2ms/step - loss: 0.2778 - accuracy: 0.8892
Epoch 194/200
71/71 [=====] - 0s 2ms/step - loss: 0.3765 - accuracy: 0.8665
Epoch 195/200
71/71 [=====] - 0s 2ms/step - loss: 0.3113 - accuracy: 0.8920
Epoch 196/200
71/71 [=====] - 0s 3ms/step - loss: 0.3604 - accuracy: 0.8636
Epoch 197/200
71/71 [=====] - 0s 2ms/step - loss: 0.2809 - accuracy: 0.9006
Epoch 198/200
71/71 [=====] - 0s 2ms/step - loss: 0.3510 - accuracy: 0.8722
Epoch 199/200
71/71 [=====] - 0s 2ms/step - loss: 0.3026 - accuracy: 0.8949
```

```
Epoch 193/200
71/71 [=====] - 0s 2ms/step - loss: 0.2778 - accuracy: 0.8892
Epoch 194/200
71/71 [=====] - 0s 2ms/step - loss: 0.3765 - accuracy: 0.8665
Epoch 195/200
71/71 [=====] - 0s 2ms/step - loss: 0.3113 - accuracy: 0.8920
Epoch 196/200
71/71 [=====] - 0s 3ms/step - loss: 0.3604 - accuracy: 0.8636
Epoch 197/200
71/71 [=====] - 0s 2ms/step - loss: 0.2809 - accuracy: 0.9006
Epoch 198/200
71/71 [=====] - 0s 2ms/step - loss: 0.3510 - accuracy: 0.8722
Epoch 199/200
71/71 [=====] - 0s 2ms/step - loss: 0.3026 - accuracy: 0.8949
Epoch 200/200
71/71 [=====] - 0s 2ms/step - loss: 0.3661 - accuracy: 0.8835
/usr/local/lib/python3.10/dist-packages/keras/src/engine/training.py:3103: UserWarning: You are saving your model as an HDF5 file via `model.save()`. This file format is considered legacy. We recommend using the Keras-native JSON format instead, which is more compact and does not require compression.
  saving_api.save_model(
```

```
def clean_up_sentence(sentence):
    sentence_words = nltk.word_tokenize(sentence)
    sentence_words = [lemmatizer.lemmatize(word.lower()) for word in sentence_words]
    return sentence_words

def bag_of_words(sentence, words):
    sentence_words = clean_up_sentence(sentence)
    bag = [0] * len(words)
    for s in sentence_words:
        for i, w in enumerate(words):
            if w == s:
                bag[i] = 1
    return np.array(bag)
```



```
for i, w in enumerate(words):
    if w == s:
        bag[i] = 1
    return np.array(bag)

def predict_class(sentence):
    bow = bag_of_words(sentence, vocabulary)
    res = model.predict(np.array([bow]))[0]
    ERROR_THRESHOLD = 0.25
    results = [[i, r] for i, r in enumerate(res) if r > ERROR_THRESHOLD]
    results.sort(key=lambda x: x[1], reverse=True)
    return [{"intent": label_encoder.inverse_transform([r[0]])[0], "probability": str(r[1])} for r in results]

def get_response(intents_list, intents_json):
    tag = intents_list[0]['intent']
    for intent in intents_json['intents']:
        if intent['tag'] == tag:
            return random.choice(intent['responses'])

def chatbot_response(text):
    ints = predict_class(text)
    res = get_response(ints, data)
    return res

# Test chatbot
print(chatbot_response("Gimana cara mengatasi depresi"))
print(chatbot_response("apa itu strategi koping?"))
print(chatbot_response("Terima kasih untuk bantuannya"))
```

1/1 [=====] - 0s 27ms/step
 Mengelola depresi melibatkan pengembangan strategi koping yang cocok untuk Anda.Beberapa tips untuk berurusan dengan depresi termasuk terlibat dalam olahraga teratur, makan makanan yar

```
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1/1 [=====] - 0s 27ms/step
 Mengelola depresi melibatkan pengembangan strategi koping yang cocok untuk Anda.Beberapa tips untuk berurusan dengan depresi termasuk terlibat dalam olahraga teratur, makan makanan yang
 1/1 [=====] - 0s 21ms/step
 Gangguan kesehatan mental yang ditandai dengan suasana hati yang tertekan atau kehilangan minat dalam kegiatan, menyebabkan gangguan yang signifikan dalam kehidupan sehari-hari.
 1/1 [=====] - 0s 19ms/step
 Anda dipersilahkan!

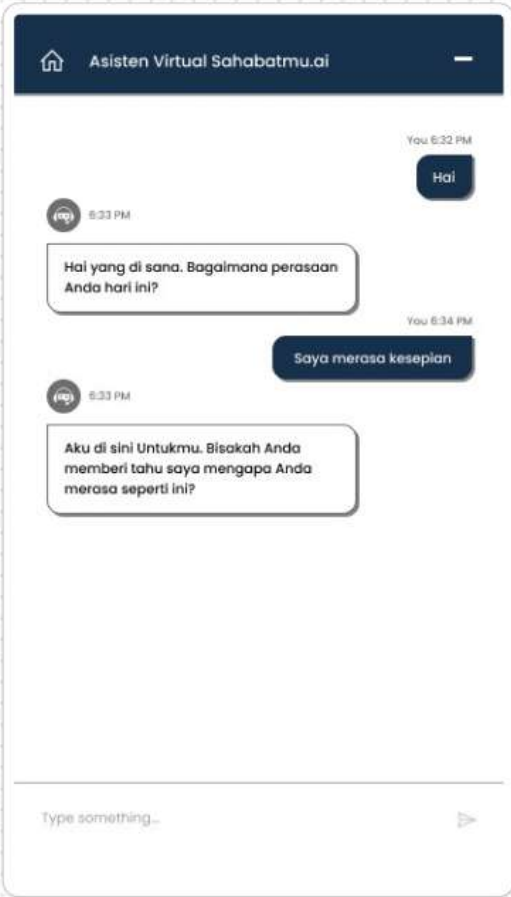
Tampilan Beranda:



Tampilan Beranda Chatbot:



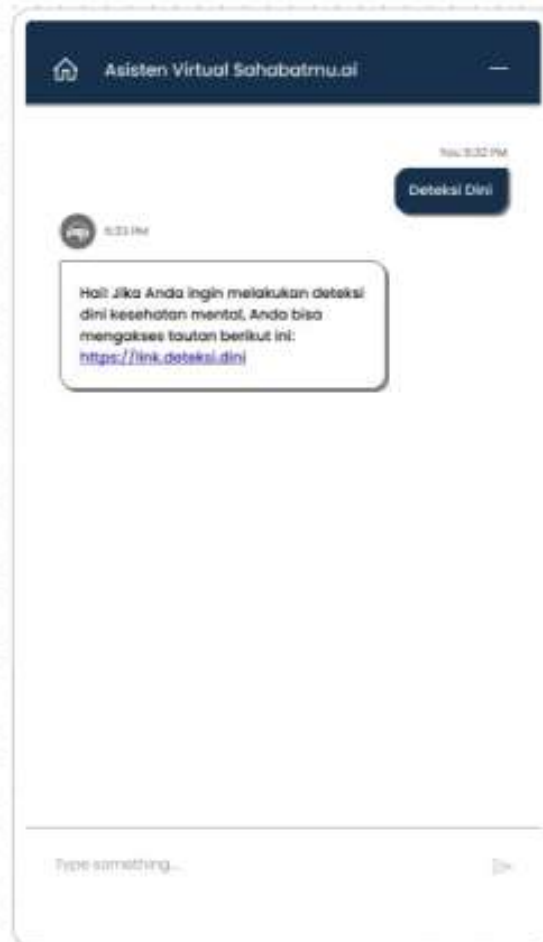
Tampilan Interaksi Chatbot:



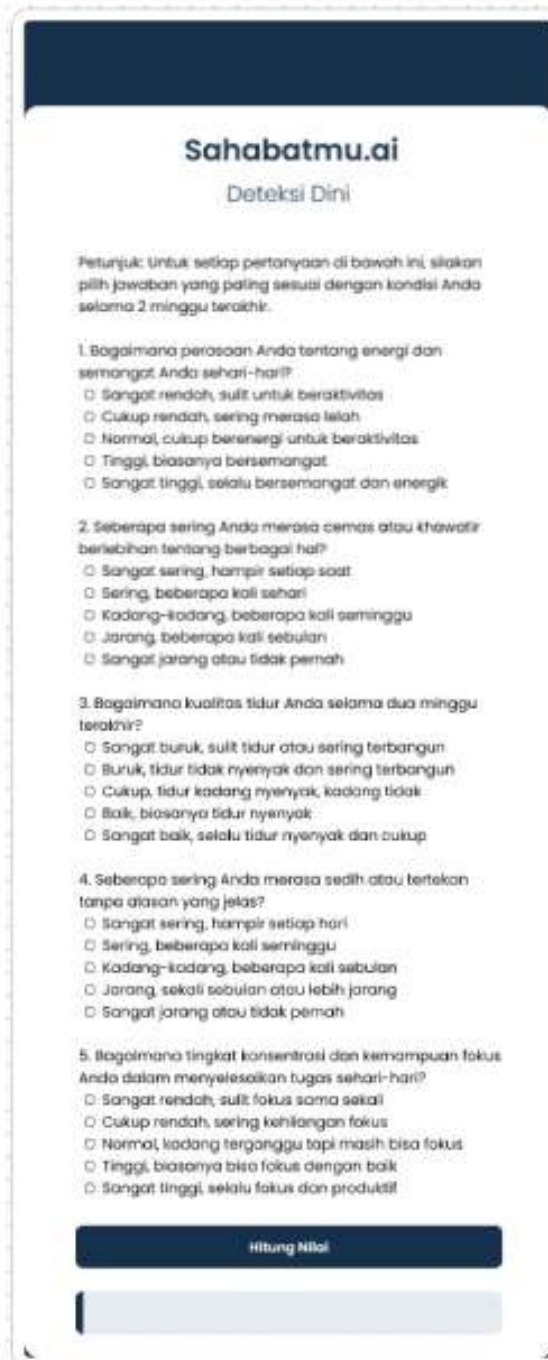
Tampilan Interaksi Chatbot:



Tampilan Interaksi Chatbot:



Tampilan Deteksi Dini:



Tampilan Deteksi Dini:



Sahabatmu.ai

Deteksi Dini

Petunjuk: Untuk setiap pertanyaan di bawah ini, silakan pilih jawaban yang paling sesuai dengan kondisi Anda selama 2 minggu terakhir.

1. Seberapa sering Anda merasa sedih, murung, atau putus asa?

- ☐ Hampir setiap hari
- ☐ Beberapa hari
- ☐ Kadang-kadang
- ☐ Jarang
- ☐ Hampir tidak pernah

2. Seberapa sering Anda merasa cemas atau gelisah?

- ☐ Hampir setiap hari
- ☐ Beberapa hari
- ☐ Kadang-kadang
- ☐ Jarang
- ☐ Hampir tidak pernah

3. Seberapa sering Anda merasa lelah atau memiliki energi rendah?

- ☐ Hampir setiap hari
- ☐ Beberapa hari

Selamat Datang di Sahabatmu.ai

Sahabat virtual Anda untuk kesehatan mental yang lebih baik.



Halo! Bagaimana saya bisa membantu Anda hari ini?

hai

Hai kamu yang disana^_^, ada yang bisa dibantu hari ini?

Kirim pesan ke Sahabatmu.ai...

Kirim

Deteksi dini