

FASHION REDIFINED WITH VIRTUAL **GROOMING AND SHOPPING ASSSISTANT**

DOCUMENTATION

INTRODUCTION

OVERVIEW

The fashion industry was among the first to recognize the value chatbots can bring to its online commerce. A chatbot in ecommerce can supply that missing link between the customer and the retailer creating a personalized approach to each user while keeping the convenience of online shopping. We come across chatbots for Burberry, Tommy Hilfiger, Sephora, Victoria's Secret, Estée Lauder – this is just a short list of brands using chatbots for interacting with their customers. At the present time, celebrities are setting the trend. For example, Megan Fox has a fantastic dressing sense, which is more than enough to make the hearts of her fans skip a beat. Believe it or not, girls are always more concerned about their attire as compared to boys. This could be the prime reason why girls take extra hours while shopping..

PURPOSE

A chat bot in e commerce can supply the missing link between the customers and the retailer creating a personalized approach to each user while keeping the convenience of online shopping many leading fashion

And beauty brands have already adopted the chat bot technology to create an individualized customer experience

LITERATURE SURVEY

EXISTING PROBLEM

In this modern era, everybody wants to be dressed up in a way that reflects 'Swag.' Evidently, your nature decides who you are, not your clothes. But at the same time, there is no loss in raising your fashion standard. At the present time, celebrities are setting the trend. For example, Megan Fox has a fantastic dressing sense, which is more than enough to make the hearts of her fans skip a beat. Believe it or not, girls are always more concerned about their attire as compared to boys.

PROPOSED SOLUTION

E-Commerce platforms is a perfect place to buy clothes due to more variety. However, online shopping isn't as easy as it sounds. Usually, customers are confronted by issues related to size, availability, etc. To overcome such problems, the fashion industry is using applications of artificial intelligence. Because of AI, nowadays, people are enjoying an amazing shopping experience.

To make e-commerce shopping experience easier we propose creating a chatbot that can :

Easily study patterns from the interaction that the bot made with a user.

Analyze and comprehend the context of the chat, to predict a user's preferences and interests.

know what style of outfit a user intends to purchase.

Dig its database to find the right match depending on user preferences.

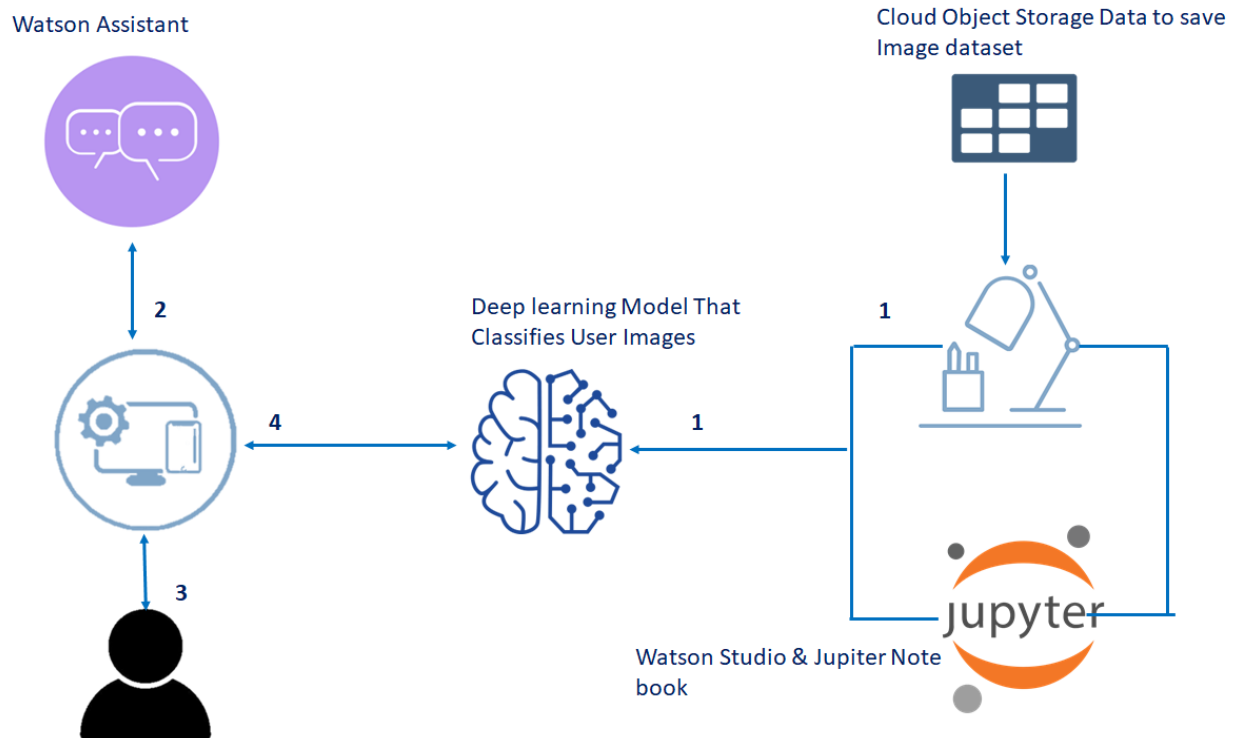
Can continuously throw different questions to users and keep them engaged to gain access to user details about their choices.

Implement image analysis to recommend the perfect outfit according to the user's physique and style preferences.

Implement Virtual search to display the desired apparels.

THEORITICAL ANALYSIS

BLOCK DIAGRAM



HARDWARE/SOFTWARE

we have used spyder and anaconda prompt and jupyter notebook in this project

DESIGNING

AI and Machine Learning pave a new domain of possibilities in the Fashion industry, from Data Analytics to Fashion Chatbot as your personal stylists. You can leverage chatbot technology to your fashion industry which will have the following benefits

Chatbots recommends products to a user based on their preferences

By virtue of visual search, it gets easy to reach the desired clothes. All you need to do is take a picture of your preferred garment and upload it online to know about its availability

Similar to voice assistants, virtual personal stylists are also out there to help you while shopping for some trendsetting clothes

EXPERIMENTAL INVESTIGATIONS

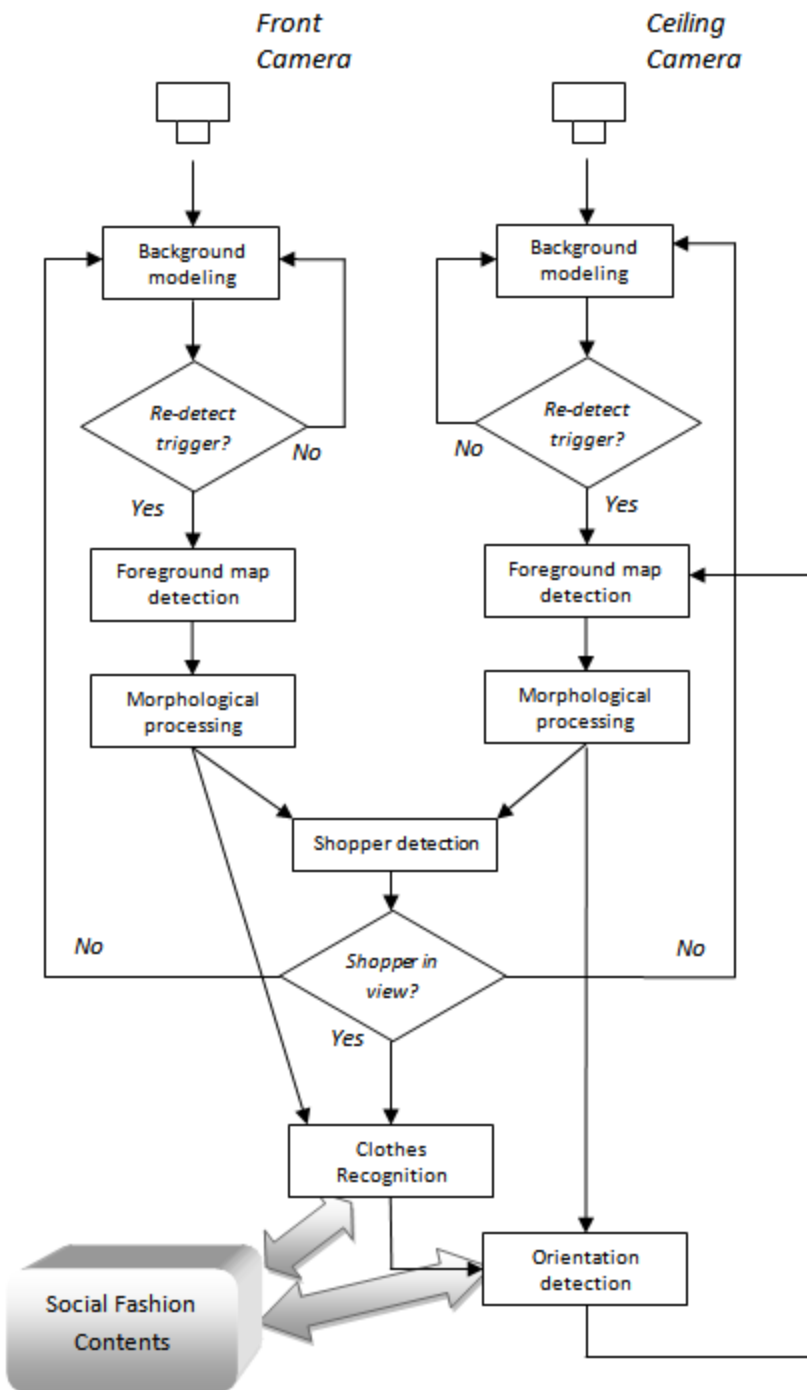
we have referred following websites before doing our project

1.

<https://smartinternz.com/guided-project/fashion-redefined-with-virtual-grooming-shopping-assistant>

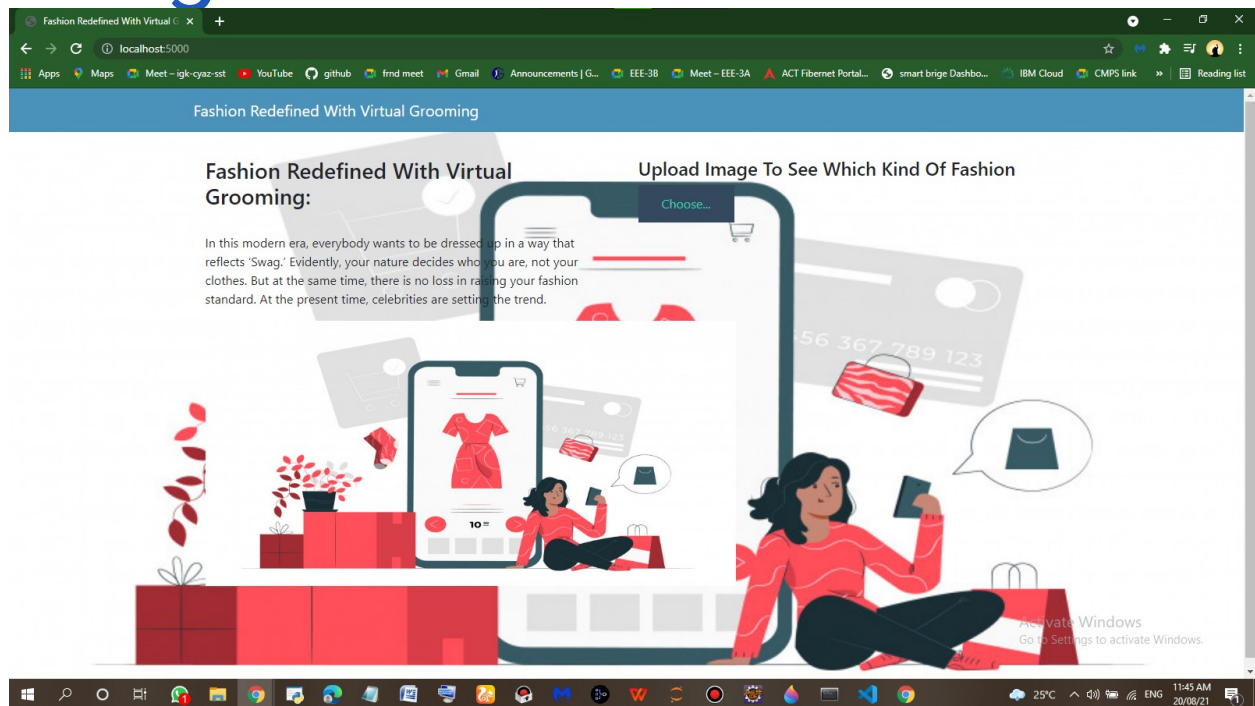
2. <https://inspora.com/en/>
3. <https://www.countants.com/blogs/ai-and-machine-learning-for-fashion-industry-global-trends-benefits/>

FLOW CHART

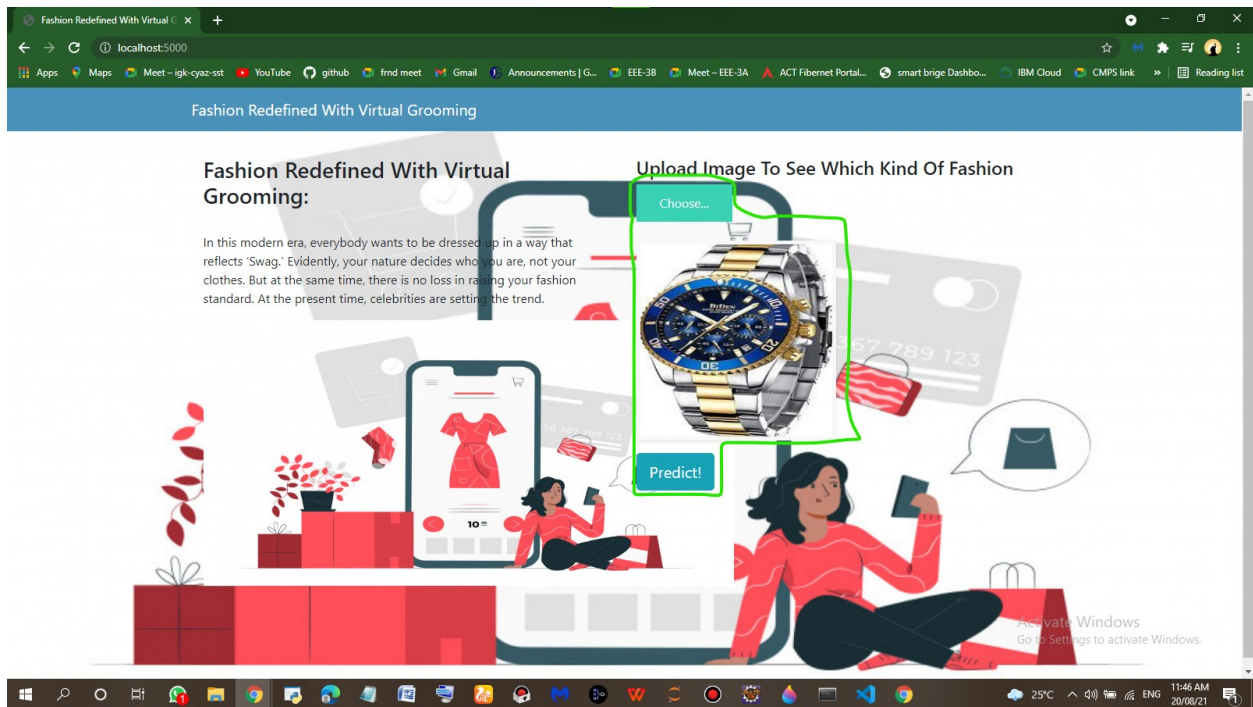


RESULT

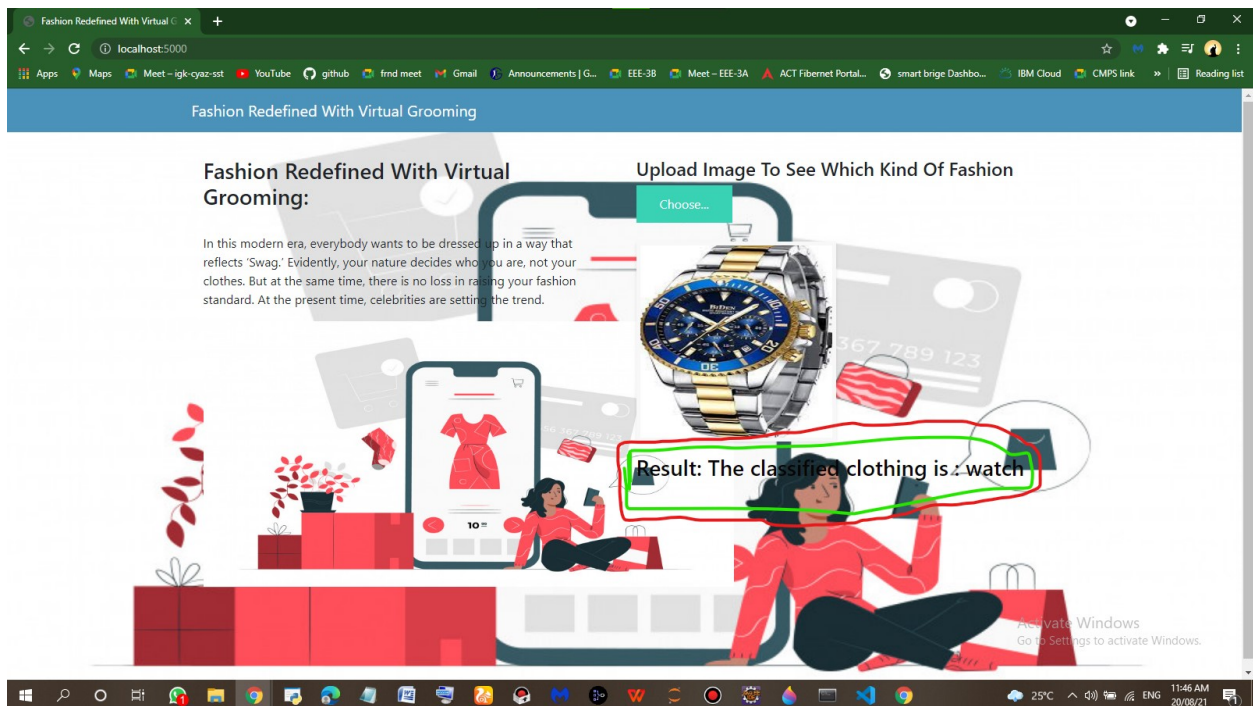
here it is asking to uplaod the image



j



here we have given the image and next predicting it



here we got the output as the classified clothing is watch

ADVANTAGES AND DISADVANTAGES

- ★ adds security
- ★ automates service
- ★ real time benefits
- ★ privacy concerns
- ★ extreme circumstance
- ★ reduction
- ★ less man power through automation
- ★ improves inventory management

applications

Alibaba

The China-based fashion retail giant, Alibaba have since 2018, adopted technologies that have revolutionized their shopping experience. With the launch of their first **FashionAI** store, the company introduced in-store features including smart garment tags, intelligent mirrors, along with Bluetooth chips embedded within every product.

Tommy Hilfiger

In partnership with IBM, Tommy Hilfiger pioneered the “**Reimagine Retail**” project that equips fashion designers with AI skills for designing. As a result, fashion students could learn a plethora of technical skills like natural language processing (NLP) or computer vision to design personalized clothing.

With the use of AI, fashion students could learn from thousands of fashion-related images that enhanced their creativity and reduced lead times for the fashion brand.

Macy's

Launched first in July 2016, Macy's AI-powered shopping assistant was aimed at improving customer's in-store shopping experience. Using NLP, Macy's “**On Call**” tool is able to respond to common customer queries like “Where can I find women's footwear” or navigate to the location of their retail stores in the U.S.

Amazon

With its AI-powered product recommendation system, this eCommerce giant has definitely revolutionized the online shopping experience. With its foray into using AI for fashion, Amazon is deploying an **AI-enabled fashion designer** algorithm that can design apparel by copying the design styles of many in-vogue clothes and applying them to a new clothing item.

conclusion

Through product personalization or better designing, there are multiple ways in which AI and machine learning technologies are impacting the global fashion industry. The increasing investments by leading fashion brands in these

technologies are proof of their immense business potential.

Through its customized solutions in AI and **machine learning**, Countants has enabled several companies leverage their investments in these technologies. Our machine learning tools have helped customers improve productivity and scale up their existing operations. **Contact us** now and leave behind your business queries. We would love to respond to you.

future scope

The use of AI in the fashion industry of 2020 has become so well entrenched that **44% of the fashion retailers** (who have not adopted AI) are today facing bankruptcy. As a result of this, global spending on AI technologies by the fashion & retail industry is expected to reach **\$7.3 billion each year** by the year 2022.

BIBLIOGRAPHY

References :

<https://www.countants.com/blogs/ai-and-machine-learning-for-fashion-industry-global-trends-benefits/>

source code

Spyder (Python 3.7)

File Edit Search Source Run Debug Consoles Projects Tools View Help

Editor - E:\project\flask\pythonchatbot.py

```
1 # -*- coding: utf-8 -*-
2 """
3 Created on Sat Aug 7 15:23:00 2021
4
5 @author: user
6 """
7
8 import json
9 from ibm_watson import AssistantV2
10 from ibm_cloud_sdk_core.authenticators import IAMAuthenticator
11
12 authenticator = IAMAuthenticator('VQPHM3U8aTEHCjyP7zeFoR8Dq7461QnEkVegyJH3U')
13 assistant = AssistantV2(
14     version='2021-06-14',
15     authenticator=authenticator
16 )
17
18 assistant.set_service_url('https://api.eu-gb.assistant.watson.cloud.ibm.com')
19 response = assistant.create_session(
20     assistant_id='88142127-adb2-4c72-8091-6861b42428e5'
21 ).get_result()
22 session_id = response
23 session_id = session_id["session_id"]
24 print(type(session_id))
25 print(session_id)
26
27 while True:
28     input_text = input("enter the text")
29
30     response = assistant.message(
31         assistant_id='88142127-adb2-4c72-8091-6861b42428e5',
32         session_id=session_id,
33         input={
34             'message_type': 'text',
35             'text': input_text
36         }
37     ).get_result()
38     print(response["output"][0]["text"])
```

Variable explorer

Name	Type	Size	Value
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Variable explorer File explorer Help

IPython console

Console 5/A

Python 3.7.3 (default, Apr 24 2019, 15:29:51) [MSC v.1915 64 bit (AMD64)]
Type "copyright", "credits" or "license" for more information.

IPython 7.6.1 -- An enhanced Interactive Python.

In [1]: runfile('E:/project/flask/pythonchatbot.py', wdir='E:/project/flask')
<class 'str'>
33a09bda-cc9e-478f-8eb6-cf7647672d88

enter the text
I will help you in looking out different fashions.....you can see available categories by clicking "show categories"...

enter the text

Activate Windows
Go to Settings to activate Windows.

Permissions: RW End-of-lines: CRLF Encoding: UTF-8 Line: 38 Column: 52 Memory: 66 %

Spyder (Python 3.7)

File Edit Search Source Run Debug Consoles Projects Tools View Help

Editor - E:\project\flask\app.py

```
13 from werkzeug.utils import secure_filename
14 from event.pywngt import WSIServer
15
16
17
18 ...
19 import json
20 from ibm_watson import AssistantV2
21 from ibm_cloud_sdk_core.authenticators import IAMAuthenticator
22 """
23 app = Flask(__name__)
24
25 model = load_model("fashion.h5")
26
27 #routing the html page
28 phone page
29 @app.route('/')
30 def base():
31     return render_template('base.html')
32
33
34 #define the predicting function
35 @app.route('/predict', methods = ['GET', 'POST'])
36 def uploads():
37     print("I am entering")
38     if request.method == 'POST':
39         f = request.files["image"]
40         print("current path")
41         basepath = os.path.dirname(__file__)
42         print("current path",basepath)
43         filepath = os.path.join(basepath,'uploads',f.filename)
44         print("upload folder is ",filepath)
45         f.save(filepath)
46         img = image.load_img(filepath,target_size = (64,64))
47         x = image.img_to_array(img)
48         print(x)
49         x = np.expand_dims(x,axis = 0)
50         print(x)
51         preds=model.predict_classes(x)
52         print("prediction",preds)
53         index = ['footwear','menswear','tshirt','watch','womenswear']
54         text = "The classified clothing is : "+str(index[preds[0]])
55         return text
56
57 if __name__ == '__main__':
58     app.run(debug = False,threaded=False)
59
```

Variable explorer

Name	Type	Size	Value
------	------	------	-------

Variable explorer File explorer Help

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Permissions: RW End-of-lines: CRLF Encoding: UTF-8 Line: 48 Column: 17 Memory: 66 %

```
Anaconda Prompt (Anaconda3) - python app.py
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
forrtl: error (208): program aborting due to control-C event
Image                PC                Routine           Line      Source
libifcoremd.dll      00007FF9C49A3B58  Unknown          Unknown   Unknown
KERNELBASE.dll       00007FFA194B8403  Unknown          Unknown   Unknown
KERNEL32.DLL         00007FFA19B87034  Unknown          Unknown   Unknown
ntdll.dll            00007FFA18B82651  Unknown          Unknown   Unknown

(base) E:\project\flask>python app.py
2021-08-20 11:22:11.945771: W tensorflow/stream_executor/platform/default/dso_loader.cc:64] Could not load dynamic library 'cudart64_110.dll'; dlerror: cudart64_110.dll not found
2021-08-20 11:22:11.946011: I tensorflow/stream_executor/cuda/cudart_stub.cc:29] Ignore above cudart dlerror if you do not have a GPU set up on your machine.
2021-08-20 11:22:15.789719: W tensorflow/stream_executor/platform/default/dso_loader.cc:64] Could not load dynamic library 'nvcuda.dll'; dlerror: nvcuda.dll not found
2021-08-20 11:22:15.789951: W tensorflow/stream_executor/cuda/cuda_driver.cc:326] Failed call to cuinit: UNKNOWN ERROR (303)
2021-08-20 11:22:15.798014: I tensorflow/stream_executor/cuda/cuda_diagnostics.cc:169] retrieving CUDA diagnostic information for host: DESKTOP-00IUQ08
2021-08-20 11:22:15.798342: I tensorflow/stream_executor/cuda/cuda_diagnostics.cc:176] hostname: DESKTOP-00IUQ08
* Serving Flask app "app" (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
```

Activate Windows
Go to Settings to activate Windows.

