

National University of Singapore
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Postcraft User Guide

Group 9

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1 Introduction

Welcome to the User Guide for our Postcraft project. Postcraft is an intelligent recommendation system for our users to generate customized, real-time, and high-quality advertising content of commercial social media posts using different kinds of inputs, so that the purpose of this user guide is to help our users to utilize our Postcraft more effectively.

2 Browse/Install

POSTCRAFT URL: <https://postcraft-ff142951a5f2.herokuapp.com/>

To get into our page, you can simply open a browser (Chrome would be the best) and type in the URL above and enter.

If you want to use our page locally on your computer, before running our website, your environment will need to have the Python version 3.11.6 or higher, and the following essential libraries installed:

Required Libraries

Liabraries	Version
flask	2.2.2
pandas	1.5.3
numpy	1.24.3
mlxtend	0.23.0
openai	0.28.1
scikit-learn	1.3.0
nltk	3.8.1
gensim	3.8.1
unicorn	21.2.0
Werkzeug	2.2.2
openpyxl	3.1.2

After that, please open a terminal and here is the process of deploying our website to your local host:

- `cd <path of the system>/POSTCRAFT`
- `python run.py`

In the terminal it will tell you which host it uses (usually the `http://127.0.0.1:5000/`). Then open a browser and type in the corresponding port number and you will get into our project locally.

3 Overview

There's no need to install or update anything else. Overall we have 3 sections on our page (as you can see on the navigation bar on top of the website). The first section you see when you first click into our page is the home page section:

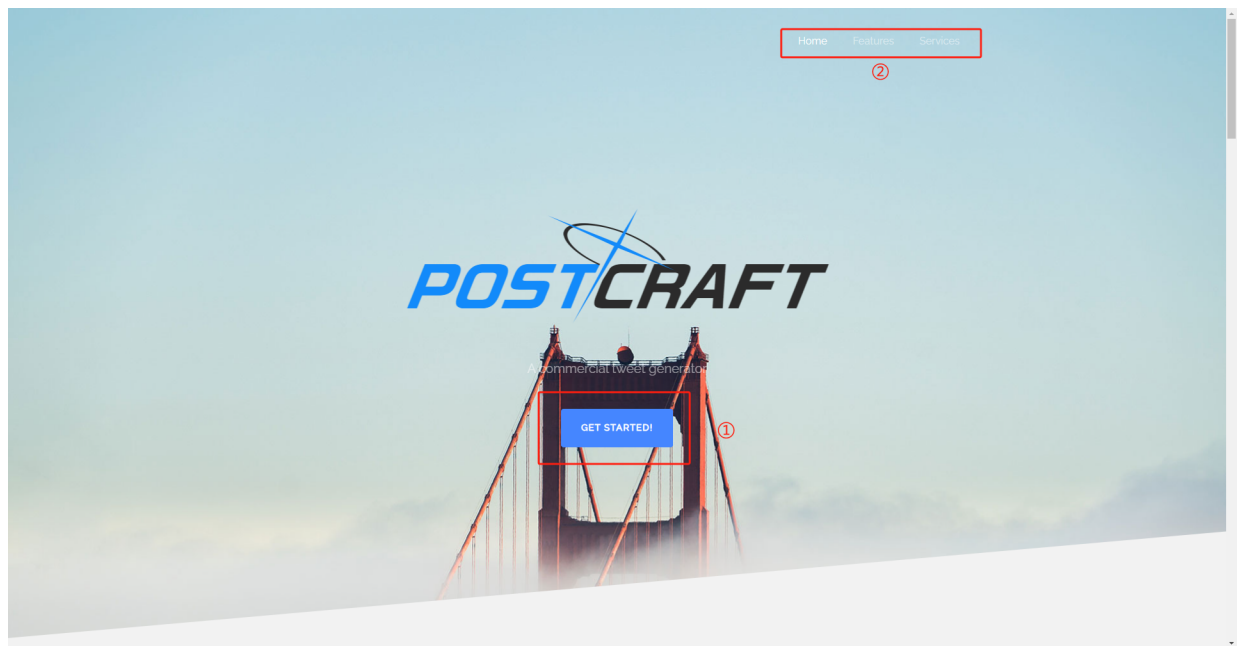


Figure 1: Home page

Here you can see a "GET STARTED!" button (1) in the middle and a navigation bar (2) on the top which contains three sections of our page. For the "GET STARTED!" button, if you click it, it will direct you to our service section, and for the navigation bar, it will direct you to each indicated section of our page (Home, Features, Services).

Next, if you scroll down or click on the "Features" in our navigation bar, you will go to the second section of our page which is the Features section:

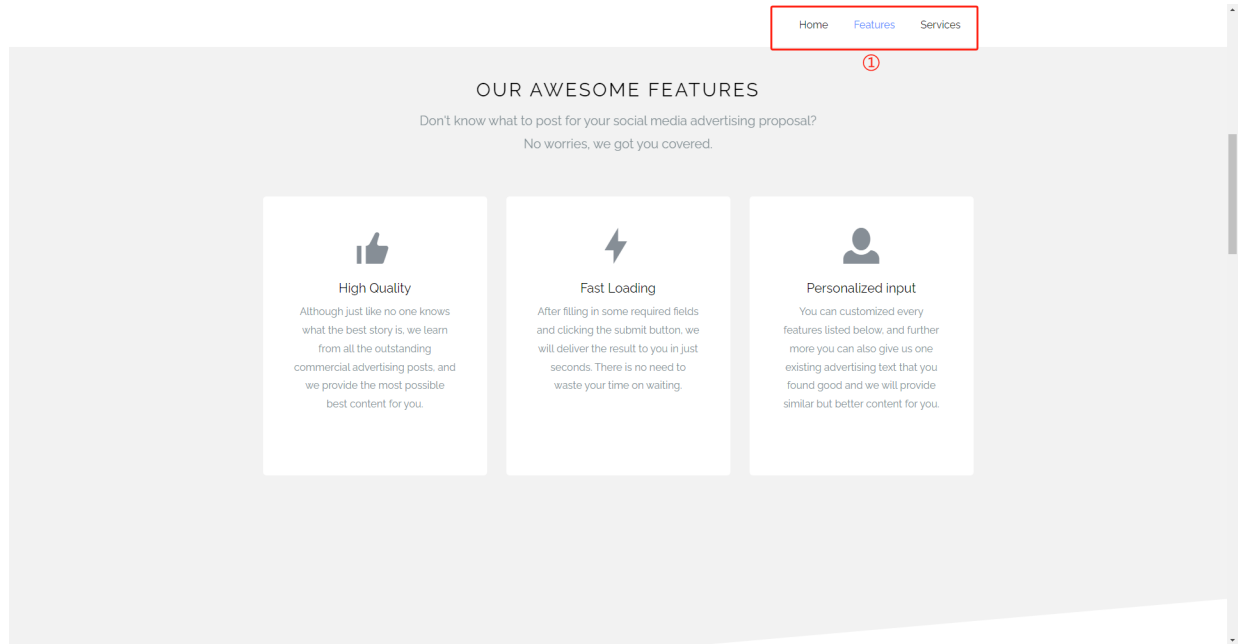


Figure 2: Features section

Here we illustrate the advantages of choosing to use Postcraft. The only thing worth mentioning is that at the top of the page, you can see our navigation bar (1) will always be following you when you browse our page.

Next, if you keep scrolling down or click on the "Services" in our navigation bar, you will go to the last section of our page which is also our core section: Services section.

Home Features **Services**

SERVICES

Please choose your intended category and output features below.

PRETRAINED NEW MODEL

Categories

Select an product category

Features

Content max length
No special need

Sentiment number
No special need

Mention count
No special need

Number of hashtags
No special need

Figure 3: Recommendation based on features input

For the following part of the User Guide, we will emphasize and illustrate every detail of how to use everything in our Services section.

4 Services

4.1 Part 1

This is the first function area of our page: generating recommended features and recommended text based on your input of our preset elements:

Figure 4: Services section 1

Here you can see four major areas and one submit button. Let us go through them one by one starting from the top which is also the best order to use this part of our services.

The first component is two buttons called "PRETRAINED" and "NEW MODEL" (1), and PRETRAINED button is selected by default. By clicking on PRETRAINED button, it indicates we will be using a pre-trained model and preset database which might not be so real-time but it generates recommendations much faster. On the other hand, by clicking on the NEW MODEL, we will be using a new database that only contains data within a specific time range.

The second component is the Category input field (2). Here in the drop-down list, we prepared some product categories for you to choose. One thing important is that choosing a category is mandatory for using this part of our service.

The third component is the Features input field (3). Here we have 8 drop-down lists and one text field, each of which indicates one type of feature that you can customize before we generate the recommendation for your intended category of products. One thing important here is that you will have to choose at least two specific requirements so that we can provide you with a meaningful recommendation.

After all of the input fields above, you can click on the SUBMIT button and wait for seconds, and our recommendation will be generated in the area below (4). On the left, it will show you our recommended overall features: what those features should be to maximize the commercial value. On the right, it will provide you with an example of your possible successful advertising text.

One more thing worth noticing is that if you choose to use the new model, we will have two more input areas for you to fill in which indicate your intended start date and end date of our database:

The screenshot displays a web interface for a 'NEW MODEL'. At the top, there are navigation links: 'Home', 'Features', and 'Services'. Below these are two buttons: 'PRETRAINED' and 'NEW MODEL'. The 'NEW MODEL' section is highlighted with a red box and contains two date input fields: 'Start Date' and 'End Date', both with a '年/月/日' (year/month/day) format and a calendar icon. Below the dates is a 'Categories' section with a dropdown menu labeled 'Select an product category'. The 'Features' section follows, with eight input fields arranged in two rows of four. Each field has a label and a 'No special need' dropdown menu. The labels are: 'Content max length', 'Sentiment number', 'Mention count', 'Number of hashtags', 'Word count', 'Image count', 'Paragraph count', and 'Interaction index'. At the bottom, there is a 'Top 3 keywords' input field.

Figure 5: NEW MODEL

4.2 Part 2

After part 1, we will have another service that generates recommendations for the attached picture of your advertising post based on your keywords:

Home Features Services

...Or you can get the picture recommendation below

Picture keywords

Enter...

SUBMIT

Recommendation Output Area

...Or you can customize your input below

Category

Enter category...

The advertising copy

...that you found great

Type here...

Figure 6: Picture recommendation

Here the keyword input (1) can be any word related to your product, such as the name of your product, the feeling, the shape, the size... After you type in your keywords and click the submit button, we will generate our recommendation of how your attached photo should best be by describing it in words in the below area (2).

4.3 Part 3

After the picture recommendation service, next is the last part of our service:

Home Features Services

...Or you can customize your input below

Category

Enter category.. ①

The advertising copy

...that you found great

Type here.. ②

SUBMIT INPUT

Recommended Features

Recommendation Output Area ③

Figure 7: Recommendation based on given text

Here you can type in any intended category of your product (1) and give us one advertising post that you found very good and successful (2), and both input areas are required for this part of our service. After that, you can click the submit input button and we will generate some recommended features of what your advertising text should have on the left and a possible example of a successful post on the right based on the given category and text. For this part of the service, it might take longer time than the first part of our service.

At last, all of the three parts of our services are separated from each other, which means the input for one area will not be brought to any other area. Please enjoy using our Postcraft!