

Design of WeChat Intelligent Processing Picture Based on Python

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Abstract: With the continuous development of WeChat, more and more people like to publish their own dynamics in the circle of friends, and the demand for picture beautification is also growing. In order to solve the problem of timeliness of users processing pictures, a picture intelligent processing robot based on WeChat platform is designed. It processes the message in real time and then automatically generates the corresponding image according to people's needs.

1. Introduction

I don't know when, WeChat has become an indispensable part of us. It not only allows us to conveniently perform chat, payment, etc., but also publishes dynamics in the WeChat circle of friends to record the growth of our growth. With the continuous development of the multimedia era, most people choose more pictures or pictures in the form of pictures when they release the dynamics of the circle of friends. For the perfect presentation of the self, the indispensable element of the picture circle is particularly important, so the landscaping of the picture has become the basic requirement for people.

The emergence of a large number of image processing software also meets the basic needs of people to beautify the picture, but it is quite time consuming to beautify the picture. In this case, the intelligent robot is particularly important. Under the continuous development of modern science and technology, intelligence and automation are a major trend, and WeChat robot has become a general direction of artificial intelligence research. To this end, this paper attempts to design a smart picture beautification processing robot based on WeChat platform, which can automatically generate corresponding pictures according to people's needs, real-time processing, convenient and fast.

2. The development environment and key technologies

2.1 Python

Python is an object-oriented computer programming language with a rich class library, so this program uses Python version 3.7.

2.2 Development Tools and Class Libraries

Pycharm is a Python IDE that helps users improve efficiency when developing in the Python language. Therefore, the program is designed and implemented using the Pycharm development tools. Since the program is about WeChat robot and image processing, you need to install the itchat library and image library.

3. The development environment and key technologies

3.1 Background Analysis

On the one hand, with the development of mobile phone intelligence, mobile APP is widely used, based on the needs of photo beautification, Meitu APP has become a must-have software for mobile phone users. These APPs are similar, and their design was originally designed to make it easier for users to beautify the picture. However, after the processing is finished, the pixels of the user's re-saved pictures are reduced, resulting in a decline in the quality of content production, and the camera is derived based on the function of the picture. Community, e-commerce and other functions have reduced the user experience.

On the other hand, WeChat has rapidly developed into a communication tool for communication in our daily lives. We can send multiple types of messages such as language, video, and pictures, and WeChat also provides a circle of friends to share content to a circle of friends. According to WeChat's first quarterly results report for 2019, the number of WeChat users has reached 1.1 billion. Based on the huge user group of WeChat, this paper will design a WeChat robot to meet the needs of users to beautify the images in real time without downloading the APP.

3.2 Feasibility Analysis

Designing the WeChat robot is conducive to enhancing the professionalization and intelligence of image processing. It should be considered from the technical, economic and legal perspectives. This program is written in object-oriented programming language Python, and the development efficiency is high. Because Python provides a rich class library, the core idea of the program: image processing is easier to implement, which fundamentally reduces the development difficulty; the program mainly exists in development. Cost, but due to the characteristics of the Python language, the development cycle is short, that is, the cost is low; the program uses caching technology when saving images, does not retain user images, and is only beneficial to users, there is no legal problem.

3.3 Framework Analysis

3.3.1 Overall Flow Chart

Firstly, the Itchat library imported by python is used to create the WeChat robot. By logging in to the WeChat webpage to obtain the permissions of the WeChat robot, on the basis of WeChat chat, it focuses on real-time processing of the image, that is, the user sends the image, and the robot will reply what it wants. The picture, then the user can send a specific keyword, such as a nine-square grid, hand-painted, sketch, or a series of information about the processing of the image, such as improving the clarity, map, etc., then the robot responds to the user's needs, immediately processes the image, and returns Give the user the intelligent processing of the picture

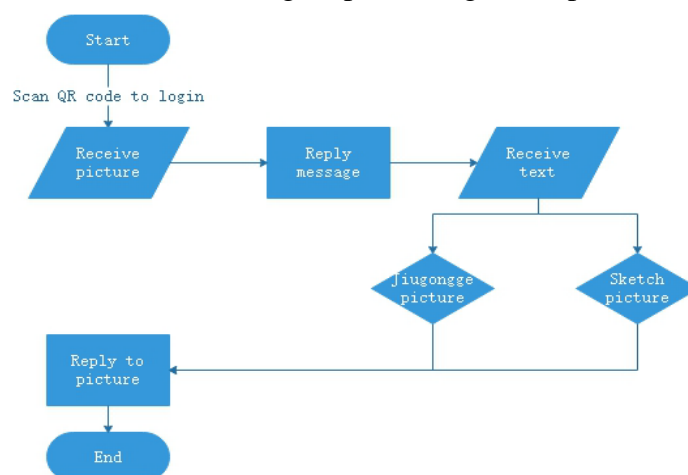


Figure 1. Overall flow chart

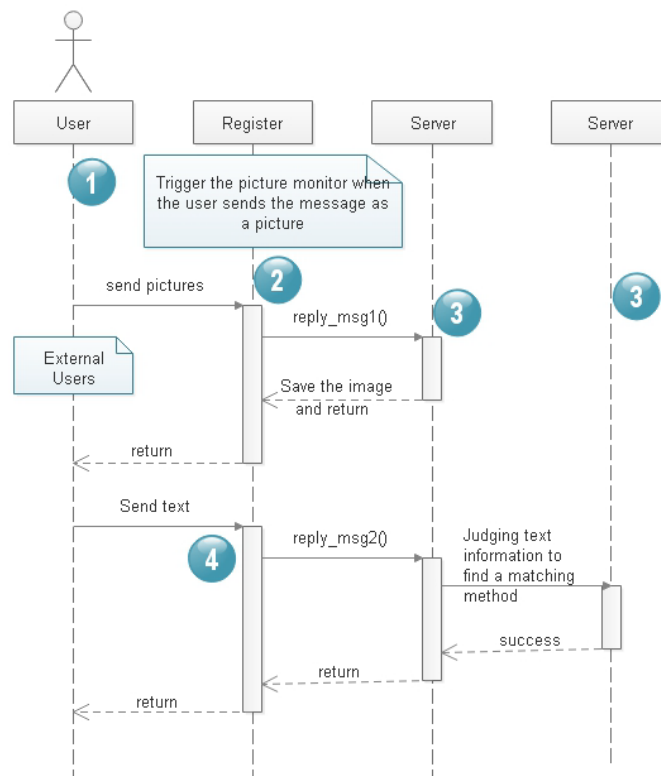


Figure 2. UML Timing Diagram

After the user sends a message to the WeChat robot, the corresponding monitor is triggered by determining whether the user sends a text message or a picture message.

4. the function is realized

4.1 Simulated Login



Figure 3. Login QR Code

When logging in, use the command line to display the generated login QR code (Figure 4.1), and the user will become a WeChat robot after scanning. After exiting the program, the temporary login status is scanned, that is, after scanning the QR code, a static file is generated for storing the login status.

4.2 Message Processing

After registering the function `download_files` through the decorator, Itchat will search for the corresponding registered method according to the received message type, and then process the message. Because the program currently only implements the function of cutting the nine squares, so let's talk about the realization of cutting the nine squares.

The specific implementation ideas of the `Jiugongge` function:

- a) Create a white background and center the initial image: by taking the initial image, compare the width and height of the image, and use the longer side as the side length of the base image, and then create a blank square image. Paste the initial image onto the newly created blank and center it.
- b) Split image: Cut the image into three equal parts and use the array to store the cut image.
- c) Save the picture.

4.3 Results Display

Since the program only realizes the function of cutting the nine-square grid, after receiving the picture, it directly cuts and returns to the user. Let friends pick a picture (Figure 4.3-1) and send it to the WeChat robot (since the background is logging in its own micro-signal, ie send the picture to me), it can receive nine pictures in order (Figure 4.3- 2. Figure 4.3-3, Figure 4.4-4) Finally, the picture is stitched together, that is, the circle of friends (Figure 4.3-5)



Figure 4. Initial Picture



Figure 5. Flatten the Picture



Figure 6.Receiving Picture-1



Figure 7. Receiving Picture-2

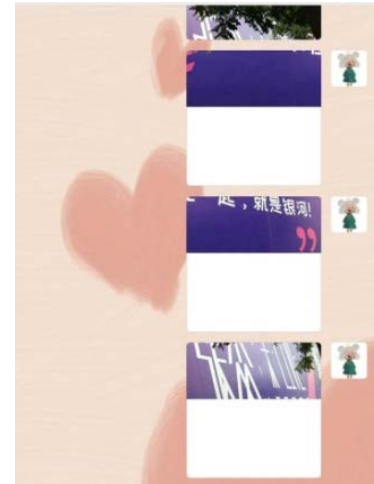


Figure 8. Receiving Picture-3

5. Summary and outlook

The small program implemented in this paper is based on WeChat platform, developed using Python3.7 object-oriented programming language, and uses Pycharm as development tool. This program mainly accomplishes the following tasks: Implementing WeChat scan login function and sending users The picture is processed, that is, the nine-square grid is cut, and is returned to the user in the cutting order after completion. Compared with the existing Mito APP, the program can ensure the quality of the drawing, does not reduce the picture pixels and affects the definition, and is more intelligent, without manual operation, saving user time. Based on the advantages of the Python

language, the program has a strong scalability, and can follow the current hotspots to increase the type of processing image options, and meet user needs in real time. In the development process of the program, due to the lack of personal experience and insufficient ability to develop the overall structure of the program, the program does not achieve the original desired results, and continuous improvement is required. For example: deploying personal micro-signals to the server to implement real-time reply function; to make the picture beautify according to the user's needs, add new picture beautification style, and provide users with multiple choices.

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