

This is a manual for the translate.py. I used PyCharm IDE for creating this, and I think you should be able to use other IDE:s that support Google Cloud for this purpose. The program might or might not work in Linux or MacOS. It should work on Windows.

You need a google cloud account with valid credit card or paypal information. Otherwise you can't set up the required API services. You can create the account in [cloud.google.com](https://cloud.google.com)

After creating a google cloud account, go to [console.cloud.google.com](https://console.cloud.google.com)

Write search "new project" to the search bar and create a new project. The name can be whatever you want.

Write "Cloud Vision API" to the search bar and navigate to the cloud vision api site. On the site click "Enable" to enable the Vision API.

Step 1: For PyCharm usage, the first step is to download the PyCharm. I used the free, community version. If you don't have Python, it gets installed too later on if you use PyCharm. Otherwise, you may need to install Python separately.

If you don't have git on your computer, download that too. It is needed for setting up the google cloud project in pycharm.

Step 2: Install docker and configure it to use some Linux distribution, like Ubuntu.

<https://www.docker.com/products/docker-desktop/>

When installed, Docker might warn that the installation is incomplete. In this case, follow the following instructions and restart Docker afterwards:

<https://docs.microsoft.com/en-us/windows/wsl/install-manual#step-4---download-the-linux-kernel-update-package>

Step 2: After installing the programs, install the Google Cloud Code plugin for accessing Google Cloud: <https://plugins.jetbrains.com/plugin/8079-cloud-code>

Step 3: Restart PyCharm and start a new project. There should be option Cloud Code: Cloud Run. If you don't see this option, try restarting the computer. After clicking the option, click "Create" to create a new project. You can name it whatever you want. The installation of google cloud code might take a while. You can check progress bottom-right. If it seems to be stuck, try to restart the IDE.

Step 4: Install needed dependencies for the project. Click the app.py in the root of the project. Click create a virtual environment using requirements.txt at the top. And then "OK".

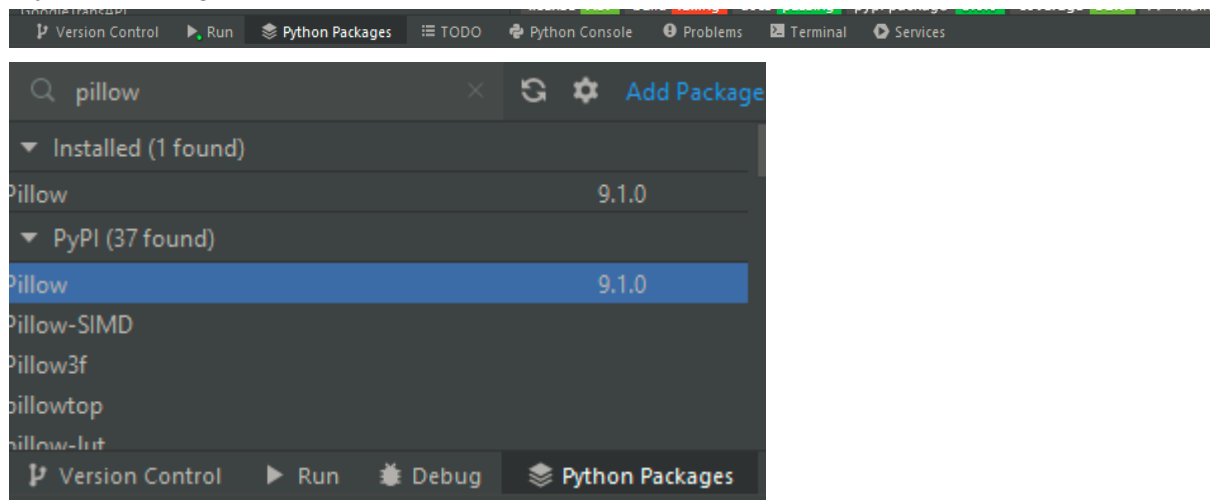
No Python interpreter configured for the project

Create a virtual environment using requirements.txt

Configure Python interpreter

It should load Python now. Afterwards restart IDE/Computer.

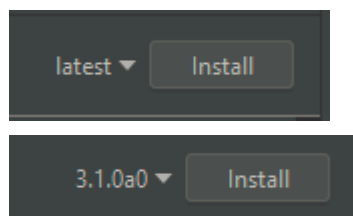
Step 5: Now you should be able to install python packages in PyCharm. There should be a “Python Packages” tab at the bottom part of the GUI.



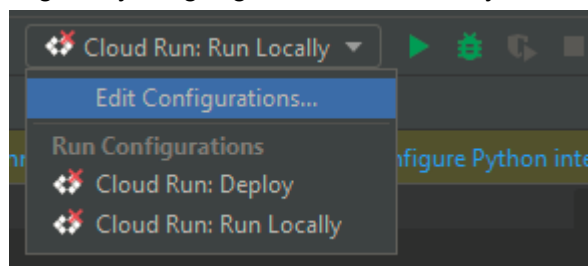
Install pyscreenshot, Pillow (needed for pyscreenshot), opencv-python (needed for cv2), pykakasi and google-cloud-vision from “Python packages”. You also need to install googletrans package version **3.1.0a0**

If you install the default version of googletrans (right now 3.0.0) the translation doesn't work at all. It is a known bug, and is fixed in 3.1.0a0. I don't know why 3.1.0a0 isn't the default version.

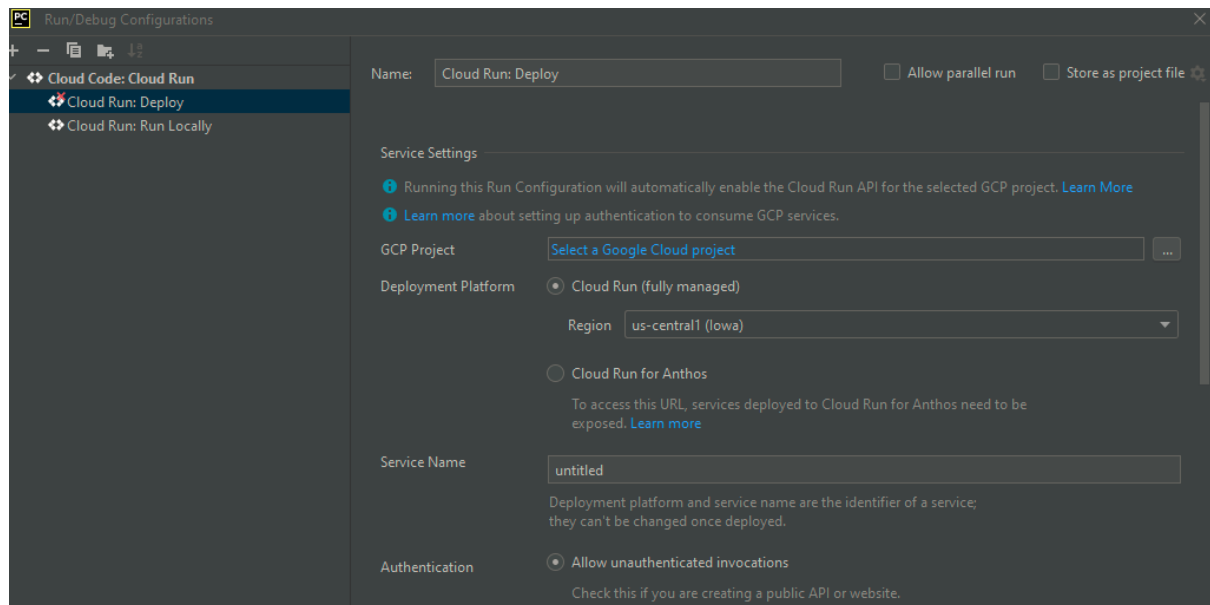
For installing googletrans version 3.1.0a0 search for googletrans, click “latest” and choose 3.1.0a0.



Login to your google cloud account by clicking the drop-down in the right corner



Click “Edit Configurations”



Click “Cloud Run: Deploy”. After this, click “Select a Google Cloud project” and login. Select your project from the list.

Restart the computer if this doesn’t work and try again.

Step 4: Insert translate.py script to the root of the project.

Now you can try to run the translate.py. Try to translate something. It will probably give you a `google.api_core.exceptions.PermissionDenied: 403`. If this is the case, do the following:

Install google CLI from <https://cloud.google.com/sdk/docs/install>

I had to install python with the installer for some reason, you might not have to. Try to install without, if it fails, install with python.

Enable IAM API. The documentation also requires it:

<https://console.cloud.google.com/flows/enableapi?apiid=iam.googleapis.com&redirect=https://console.cloud.google.com>

Make everything default when starting google cli.

Create a new key and/or service account for your machine with the following documentation:

[Creating and managing service accounts | IAM Documentation | Google Cloud](#)  
[Getting started with API Keys | API Keys API Documentation | Google Cloud](#)

You don’t need to download oauth21 on windows.

Remember to download the key to your computer in JSON format.

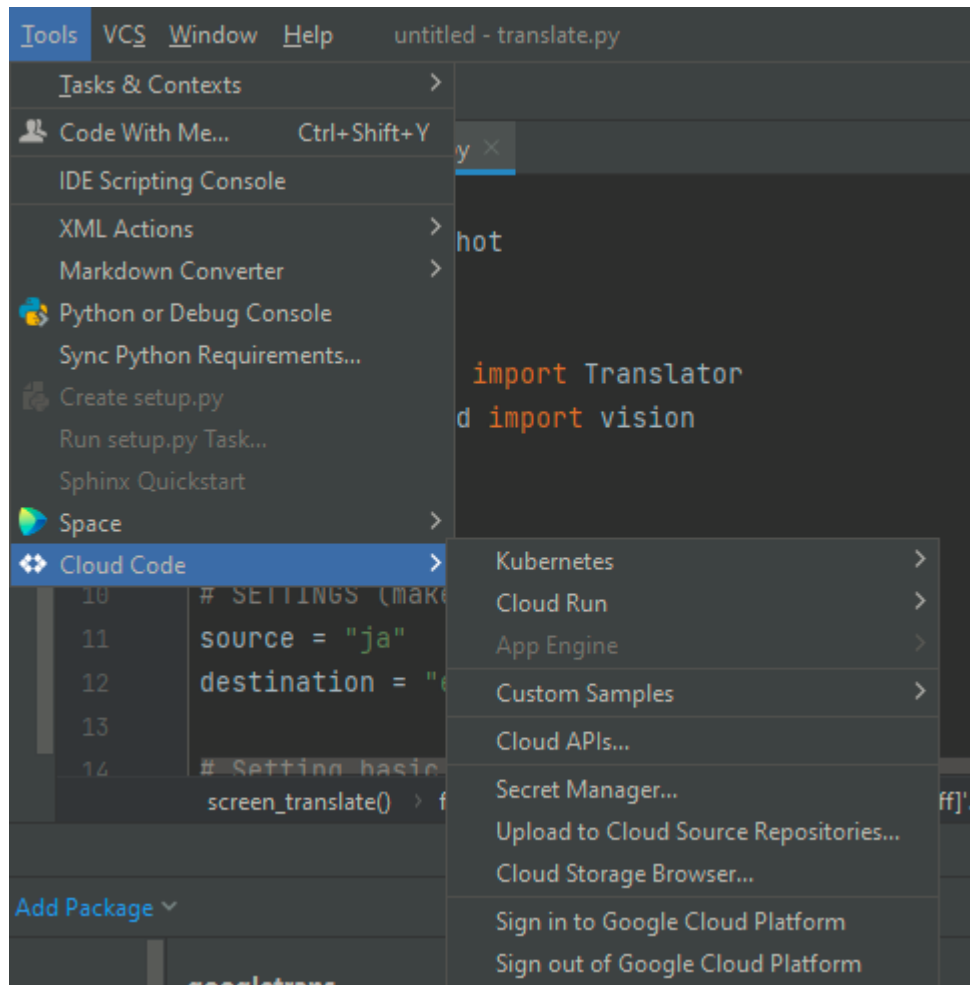
Login to CLI with the following command:

```
gcloud auth activate-service-account <service account email> --key-file=<JSON key file>
```

Where service account email is the account with which you generated the json and the json is the json you just downloaded. You need the path to the json file for it to work. For example "C:\Users\user\Downloads\example.json". Filled command will look like this:

```
gcloud auth activate-service-account example@example.com
--key-file="C:\Users\user\Downloads\example.json"
```

Log out of pyCharm by clicking "Tools" "Cloud Code" "Sign out" and log back in afterwards. Now everything should work as expected.



## Using the program

You can crop by left-clicking and dragging. The console shows the translations. If you want to crop a smaller area than fullscreen, right click and crop the area you want and press "w". It should now be smaller. Press "w" every time you want to refresh the screen. Press "f" for a new, full screen image. Press

and “q” to quit the program. You might need to press and hold the buttons for a bit for them to work.