

# Installation and User Guide

## Prerequisite

- MacOS (The system we developed on)
- Computer with internet access
- Anaconda installed
- Pycharm installed

## Deployment

1. To get started, you can download the source code at

[https://github.com/xiaohuihong/PLP-PM-2022-11-07-GRP-01-Virtual\\_Personal\\_Assistant.git](https://github.com/xiaohuihong/PLP-PM-2022-11-07-GRP-01-Virtual_Personal_Assistant.git)

2. Create a python 3.7 environment as shown in the following. You can replace the <env> with any name you want to use.

```
conda create -n <env> python=3.7
conda activate <env>
```

3. In the code folder, run the below commands to install the packages.

```
pip install -f --user numpy pandas nltk bs4 python-telegram-bot
spacy==2.3.5 tensorflow keras seaborn wordcloud scipy transformers
SentencePiece sklearn chatterbot==1.0.4 chatterbot_corpus
pip3 install torch torchvision torchaudio --extra-index-url
https://download.pytorch.org/whl/cu116
python -m spacy download en
conda install -y numpy jupyter notebook
```

4. Go to the `question_answering` folder,  
download the dataset zip file from  
[https://drive.google.com/file/d/117wHqq5Cb4wDjqrMr0uXQ\\_FbBQSFTthxZ/view?usp=sharing](https://drive.google.com/file/d/117wHqq5Cb4wDjqrMr0uXQ_FbBQSFTthxZ/view?usp=sharing)  
download the model zip file from  
<https://drive.google.com/file/d/1PvJPqAWSD0zygl-cBWkHn2YsZOVou0E1/view?usp=sharing>  
And unzip these two files into the `question_answering` folder.  
Then the `./question_answering/dataset` folder would be like

dataset				
Folder shared on iCloud by me				
Name		Date Modified	Size	Kind
qa_char_vocab.npy Added by Me		31 Oct 2022 at 11:53 PM	5 KB	Document
qa_char2idx.npy Added by Me		31 Oct 2022 at 11:53 PM	3 KB	Document
qa_idx2word.npy Added by Me		31 Oct 2022 at 11:53 PM	2.4 MB	Document
qa_word_vocab.npy Added by Me		31 Oct 2022 at 11:53 PM	11.25 GB	Document
qa_word2idx.npy Added by Me		31 Oct 2022 at 11:53 PM	2.4 MB	Document
qac2id.pickle Added by Me		1 Nov 2022 at 12:00 AM	3 KB	Document
qaglove_vt.npy Added by Me		1 Nov 2022 at 12:03 AM	265.1 MB	Document
qatest.pkl Added by Me		1 Nov 2022 at 12:01 AM	42.4 MB	Document
qatrain.pkl Added by Me		1 Nov 2022 at 12:01 AM	110.4 MB	Document
qaw2id.pickle Added by Me		1 Nov 2022 at 12:00 AM	2.4 MB	Document
squad_test.json Added by Me		24 Oct 2022 at 11:58 AM	4.9 MB	text document
squad_train.json Added by Me		24 Oct 2022 at 11:58 AM	30.3 MB	text document

Then the `./question_answering/model` folder would be like

model				
Folder shared on iCloud by me				
Name		Date Modified	Size	Kind
model_encoder_transformer.h5 Modified by Me		Today at 6:26 PM	143.4 MB	Document
model_stacked_bilstm.h5 Added by Me		Today at 3:04 AM	148.7 MB	Document

Download the glove file from <https://nlp.stanford.edu/data/glove.840B.300d.zip>

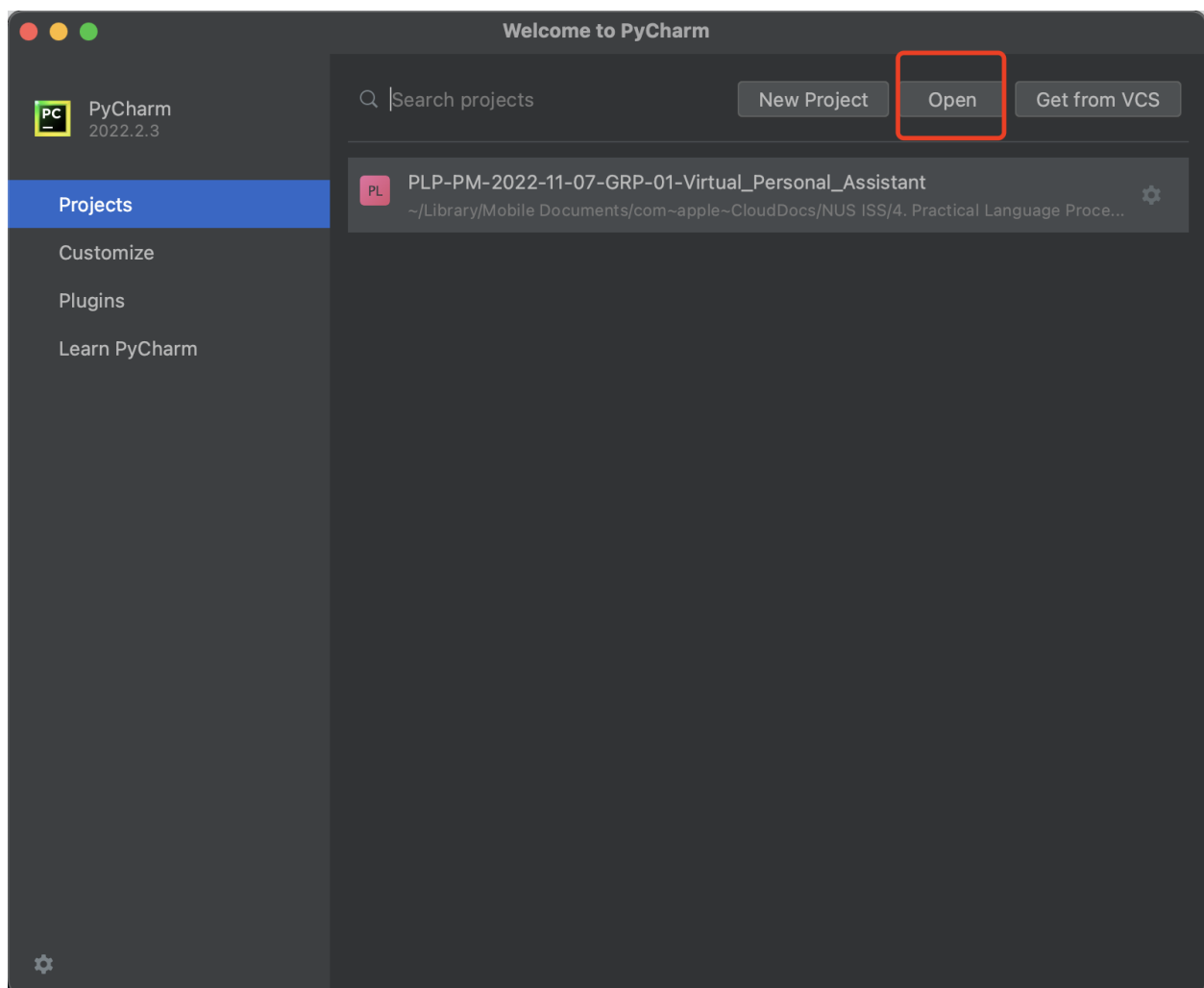
And unzip the file "glove.840B.300d.txt" into dataset folder, then the final dataset folder is like

dataset				
Name		Date Modified	Size	Kind
glove.840B.300d.txt		25 Oct 2015 at 1:35 AM	5.65 GB	Plain Text
qa_char_vocab.npy		31 Oct 2022 at 11:53 PM	5 KB	Document
qa_char2idx.npy		31 Oct 2022 at 11:53 PM	3 KB	Document
qa_idx2word.npy		31 Oct 2022 at 11:53 PM	2.4 MB	Document
qa_word_vocab.npy		31 Oct 2022 at 11:53 PM	11.25 GB	Document
qa_word2idx.npy		31 Oct 2022 at 11:53 PM	2.4 MB	Document
qac2id.pickle		1 Nov 2022 at 12:00 AM	3 KB	Document
qaglove_vt.npy		1 Nov 2022 at 12:03 AM	265.1 MB	Document
qatest.pkl		1 Nov 2022 at 12:01 AM	42.4 MB	Document
qatrain.pkl		1 Nov 2022 at 12:01 AM	110.4 MB	Document
qaw2id.pickle		1 Nov 2022 at 12:00 AM	2.4 MB	Document
squad_test.json		24 Oct 2022 at 11:58 AM	4.9 MB	text document
squad_train.json		24 Oct 2022 at 11:58 AM	30.3 MB	text document

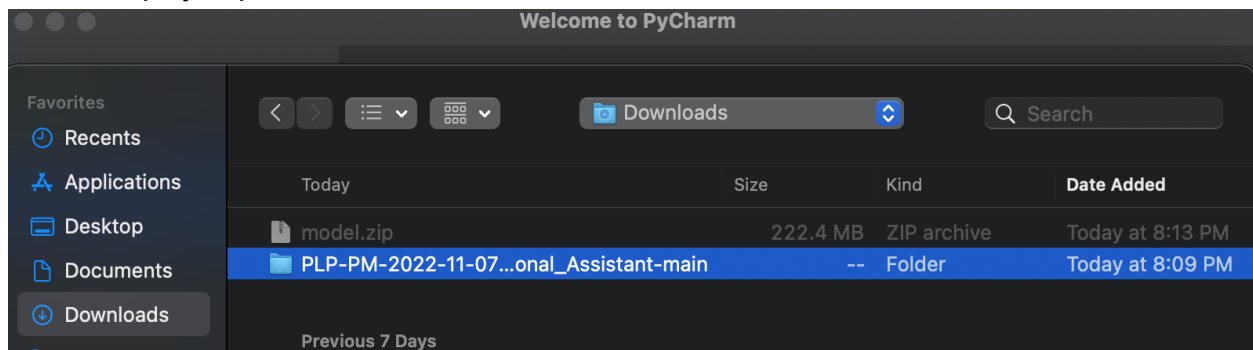
5. Go to the `text_summarization` folder, download the dataset zip file from [https://drive.google.com/file/d/1D6gKuxjNpiVU\\_KB16kaSI7-p75uwQQ2h/view?usp=sharing](https://drive.google.com/file/d/1D6gKuxjNpiVU_KB16kaSI7-p75uwQQ2h/view?usp=sharing) And unzip the file into `text_summarization` folder, then the `./text_summarization/model` folder is like

✓	model	Added by Me	3 Nov 2022 at 11:31 AM	--	Folder
✓	t5_model	Added by Me	3 Nov 2022 at 11:31 AM	--	Folder
	config.json	Added by Me	2 Nov 2022 at 12:56 PM	1 KB	text document
	pytorch_model.bin	Added by Me	2 Nov 2022 at 12:58 PM	242.1 MB	MacBin...archive

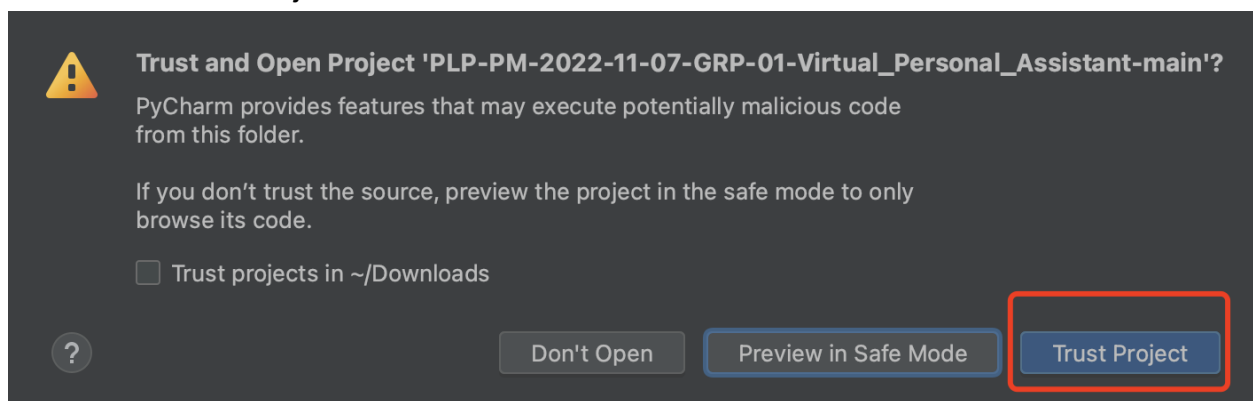
6. Open Pycharm, click the “Open” button.



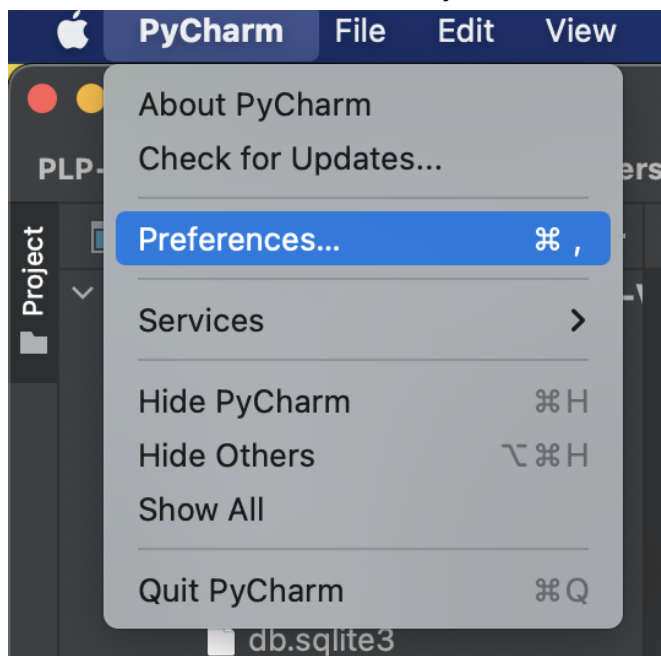
Select the project parent folder.



Click on the "Trust Project".



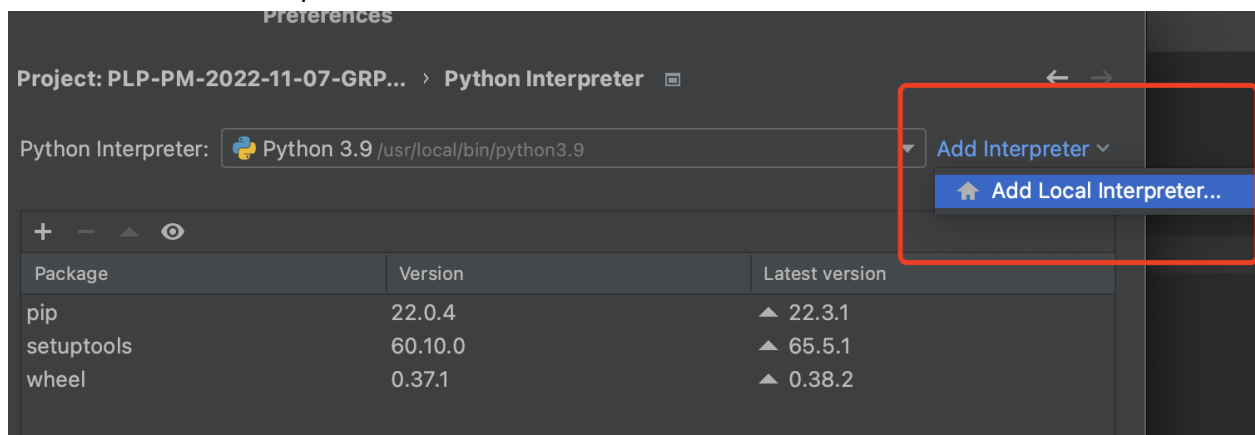
Select the "Preference..." in the PyCharm menu.



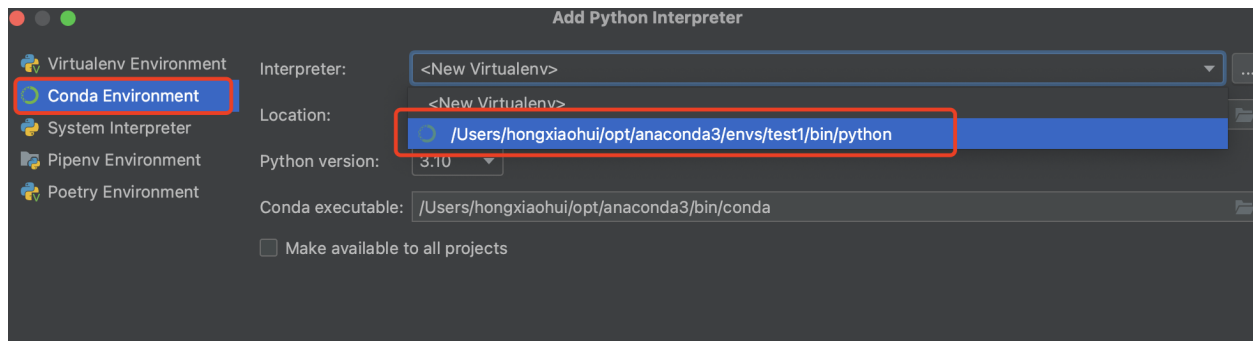
Select the “Python Interpreter” under the current project.



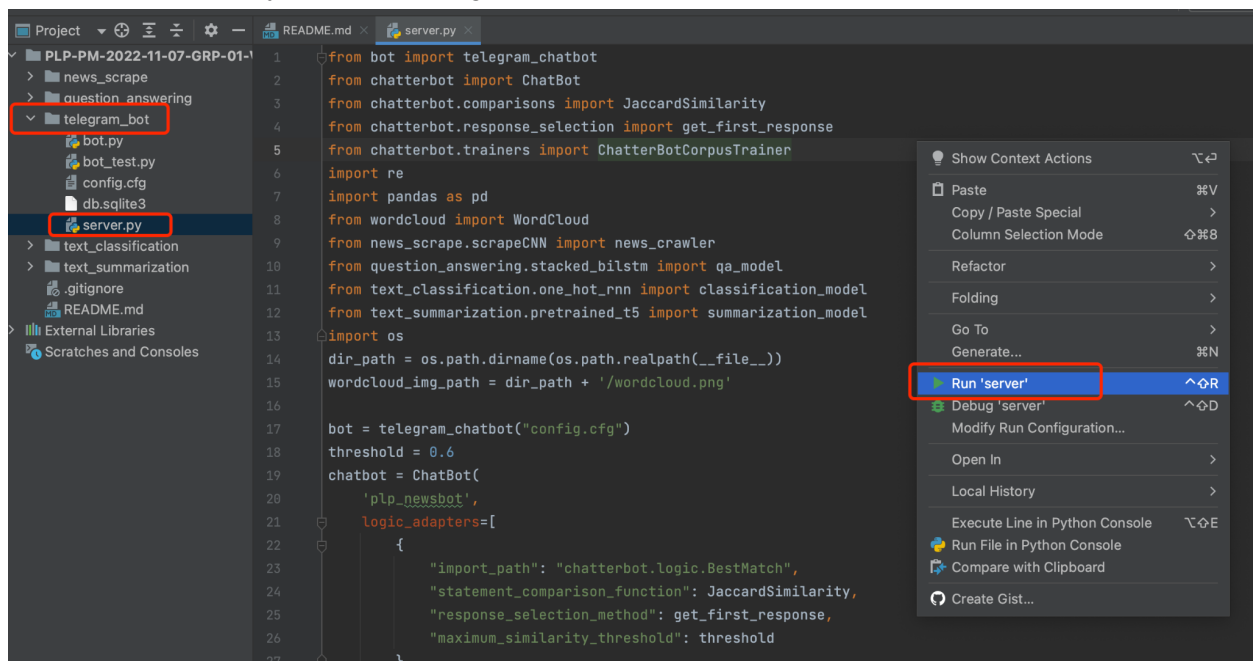
Select “Add Local Interpreter...”



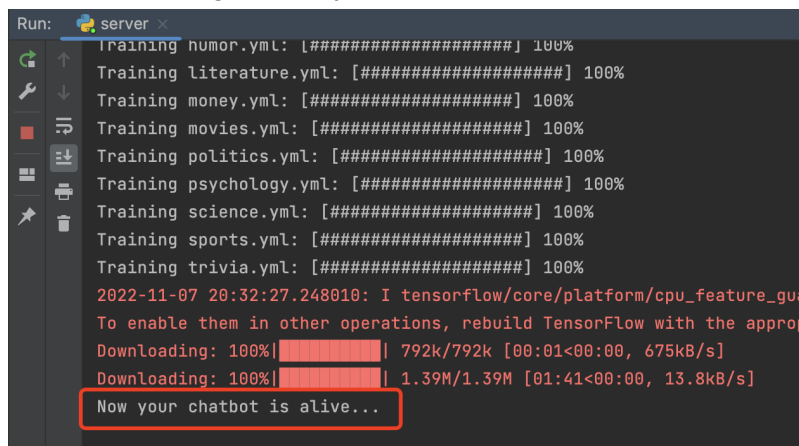
Choose the “Conda Environment” and select the env you created in the step2. And Click OK to apply the changes.



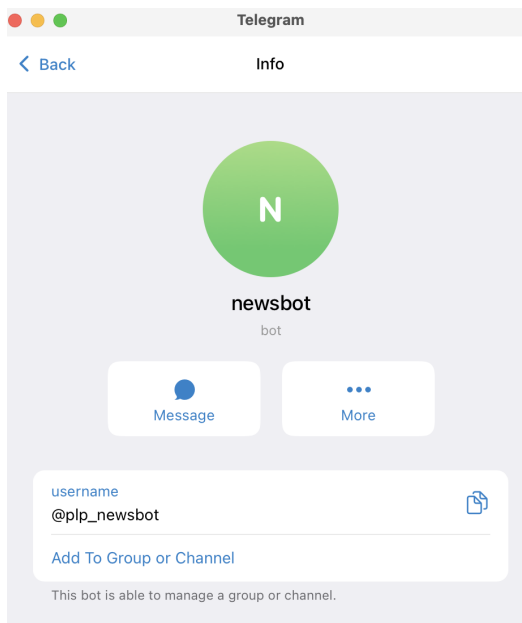
Choose the server.py under the telegram\_bot folder, and Run it.



From the running output, you can see that the chatbot is alive...



7. Open this link [t.me/plp\\_newsbot](https://t.me/plp_newsbot) to add this bot account into your telegram. And you would find this account



8. Now you can communicate with our system

