

BWBrothers: User manual

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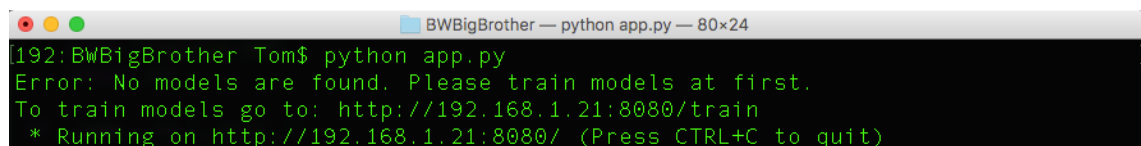
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1 How to setup BWBigBrother

BWBigBrother is a Python server used primarily as a prediction machine for game StarCraft. If a user wants to launch Python server, he has to conduct several steps. First, he has to change variable with IP address in Python script *app.py* -

`ip = "192.168.1.21"` – to the IP address of his computer. After that, he can launch the server with command `python app.py` from his terminal or command line, depending on the operating system.



```
192:BWBigBrother Tom$ python app.py
Error: No models are found. Please train models at first.
To train models go to: http://192.168.1.21:8080/train
* Running on http://192.168.1.21:8080/ (Press CTRL+C to quit)
```

Figure 1: Launch of server

1.1 Training models

Upon launching the Python server in the Fig. 1, the user will be informed that he has to train models. The first step to train all the models is to visit web page stated in the Fig. 1. In our example it would be at `http://192.168.1.21:8080/train`.

This operation will take 5-10 seconds and the user will be informed when the operation has finished successfully, as shown in the Fig. 2.

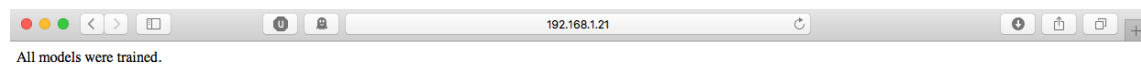


Figure 2: Training models

1.2 Testing server

After the training, the user can see if the models were trained correctly by visiting this web page - `http://192.168.1.21:8080/test`. At the end it should generate the same output as shown in the Fig. 3. If no errors were displayed during the process, the server is ready to be used.



Figure 3: Testing server

1.3 Removing models

If the user wants to change or remove his models, he can do so by visiting this web page - <http://192.168.1.21:8080/wipe>. This will remove all the models and training has to be repeated to create new models.

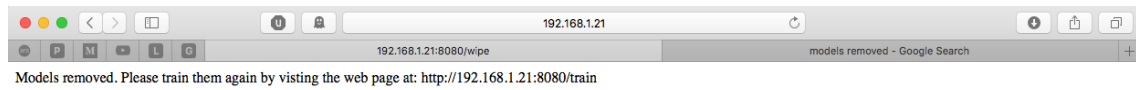


Figure 4: Removing models

2 How to setup BWSmallBrother

BWSmallBrother is a small Java module, and as it is a part of BWAPI, it requires both StarCraft and BWAPI to be installed to work properly. In the first step, the user has to install StarCraft and update it to version 1.16.1 if the version of his installed game is different. Besides, the user must have installed 32-bit JRE in order for the software to work properly.

2.1 BWAPI installation

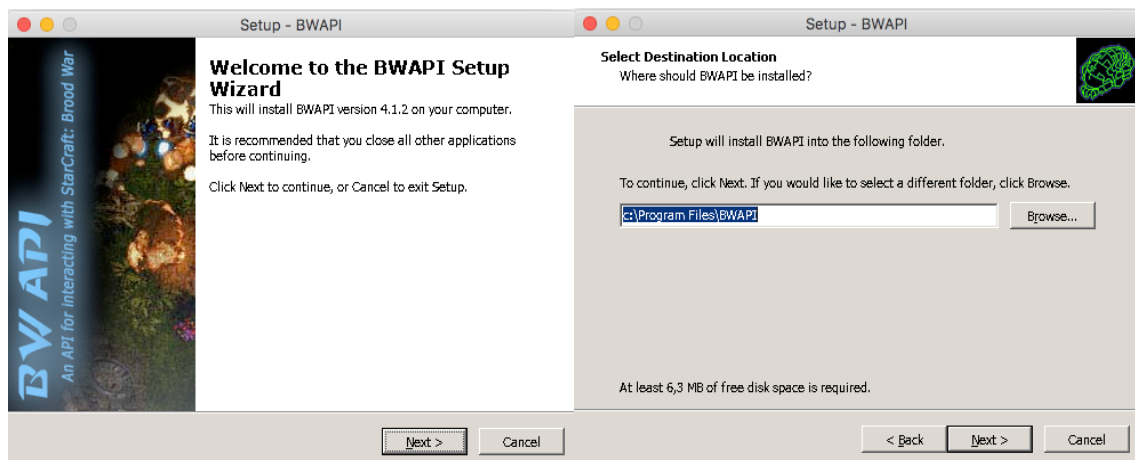


Figure 5: BWAPI installation process

After downloading BWAPI version 4.1.2, the user runs *BWAPI_412_Setup.exe*¹ to install BWAPI as shown in the Fig. 5. Installation process is quick, and most of the time the software will automatically detect StarCraft installation. In case it doesn't, then there is also an option to navigate to the StarCraft directory. The path to install BWAPI should be different than the path where StarCraft is installed.

When BWAPI is installed, the user has to go to the 'BWAPI\Chaoslauncher' directory and remove the 'BWAPI_PluginInjectord.bwl' file. Before launching BWAPI with software Chaoslauncher, the user has to setup Java module.

2.2 Module installation

There are two methods to setup and launch Java module in order to enable the communication with the server. The first method is better suited for developers, while the second one is for anyone who wants to try BWSmallBrother module.

¹https://github.com/bwapi/bwapi/releases/download/v4.1.2/BWAPI_412_Setup.exe

2.2.1 Method 1: IDE

For this method the user must have the Eclipse IDE installed in order to be able to import the whole project. The user clicks on *File -> Open Projects from File System...*, and then finds the directory where the BWSmallBrother Java project is located. After Eclipse finds the project, the user confirms import by clicking on *Finish*.

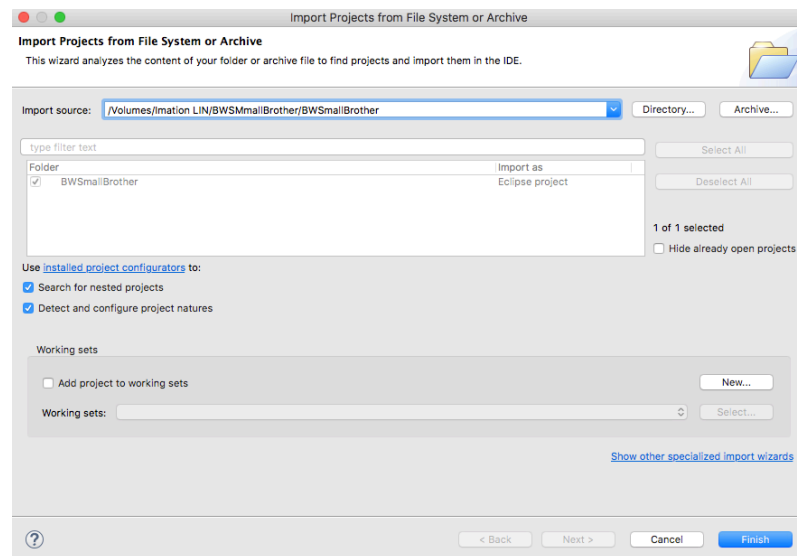


Figure 6: Importing project

Upon importing the project, the user also imports libraries located in the project, if they weren't located beforehand. Finally, he should end up with the project structure as shown in Fig. 7. Before running the software, the user has to first change the file - *settings.ini*.

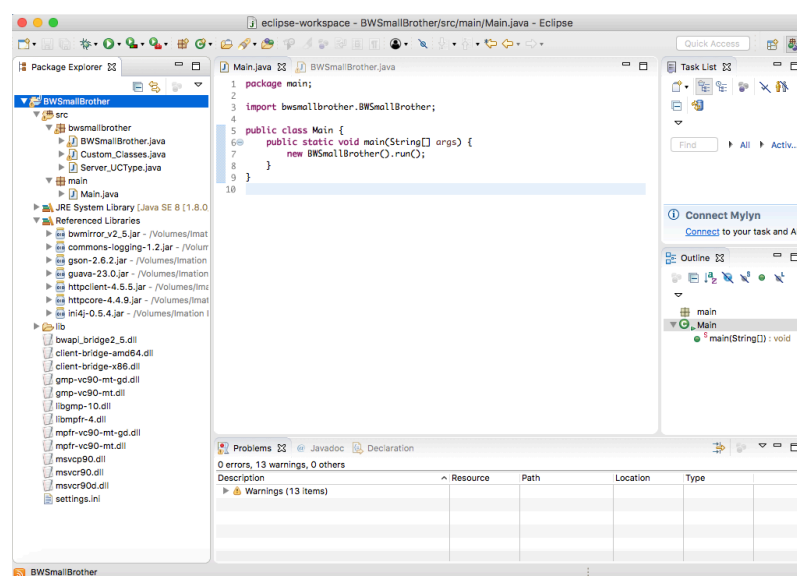


Figure 7: Project structure

2.2.2 Method 2: Install module

The first step to install this module without the Eclipse IDE is to copy the `BWSmallBrother-v1.jar` file to the directory `/bwapi_data` located in the BWAPI installation directory. After that, the user has to locate `bwapi.ini`, located in the same directory, and then find the line that starts with `ai=` and change it to `ai = BWSmallBrother-v1.jar`. Then he also needs to change the settings in the `settings.ini`.

2.3 Settings.ini

The settings file can be opened in the Notepad or any other text editor. The user has to find the line `ip address` in the file and change it to the IP address of his server. In our example it would be `192.168.1.21`. Then he should set player's name by changing the line `player`. The player with this name will be recorded during the game. After changing the file, the user can launch the BWAPI with Chaoslauncher.

2.4 Chaoslauncher

After the Chaoslauncher launches, it checks *BWAPI 4.1.2 Injector [RELEASE]*. If StarCraft is not found, the user needs to locate it manually. It is important to choose StarCraft version 1.16.1. After clicking on the button *Start*, the game will automatically launch. Inside the game menu, the user needs to start the game by choosing a map and wait a few seconds for BWTA to analyze the map. If everything is working correctly, the Java module will start sending the records of action to the server.

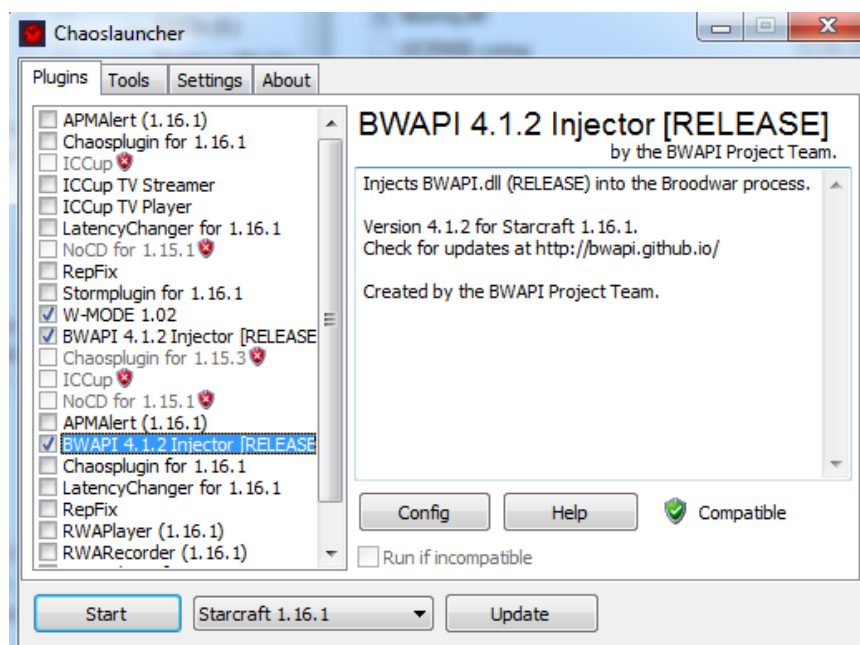


Figure 8: Chaoslauncher with BWAPI