

# Gym-UnrealCV Library

## 1. UnrealCV Library [ref](#)

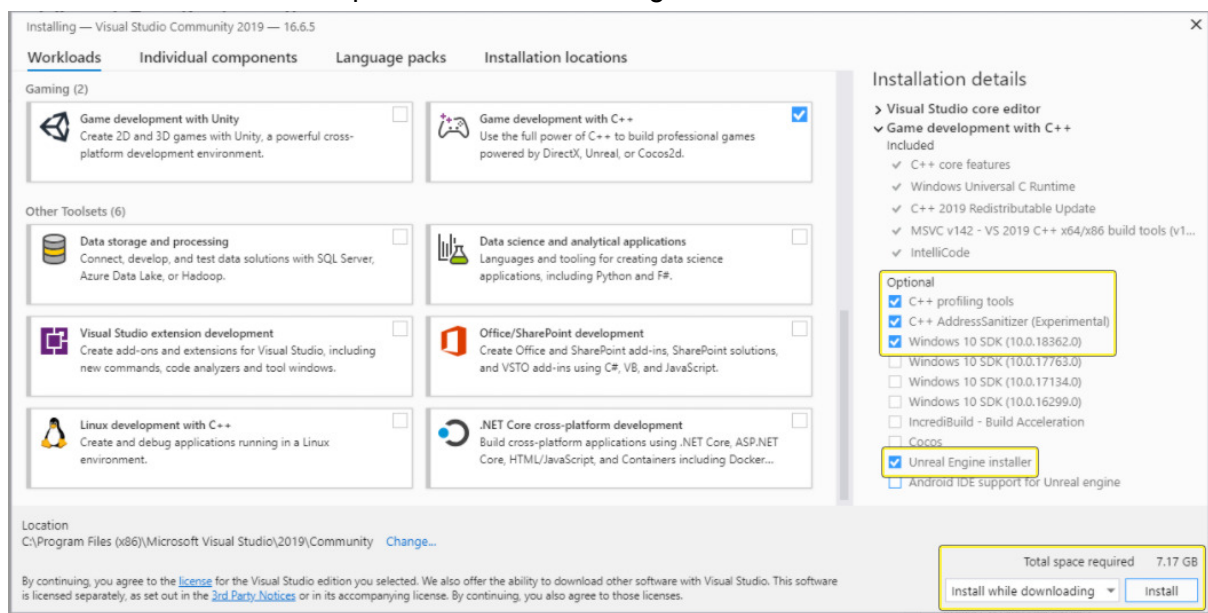
### Installation of the Unreal Plugin

#### 1. Source Code

```
git clone https://github.com/hxu296/unrealcv
cd unrealcv
git checkout 4.27
```

#### 2. Download Visual Studio code 2017 (do not download the latest version)

##### a. Check the options as show in the figure



#### 3. Compile UnrealCV plugin

```
pip install -U unrealcv
python build.py
# This script will search common Unreal Engine folders of Windows and Mac
# If this script fails to find UE4 installation path, you can also manually specify the engine path
python build.py --UE4 {UE4}
# For example
# python build.py --UE4 "/Users/Shared/Epic Games/UE_4.27"
```

After running this command you should see **Automation.Execute: BUILD SUCCESSFUL** and the plugin binaries will be produced in the **Plugins/UnrealCV** folder.

#### 4. Install to Unreal Engine

- Go to the plugin folder of Unreal Engine which is **Engine/Plugins**
- Put **UnrealCV** folder from **unrealcv/Plugins** into the **UE\_4.27/Engine/Plugins** folder.

#### 5. Enable the Plugin

- a. Open **Menu -> Edit -> Plugins** in the UnrealEngine Project, search for UnrealCV and enable it.



## 2. Gym - UnrealCV Library<sup>ref</sup>

### Dependencies

pip install gym==0.19

For Linux

Refer <https://github.com/zfw1226/gym-unrealcv> Readme file for installation

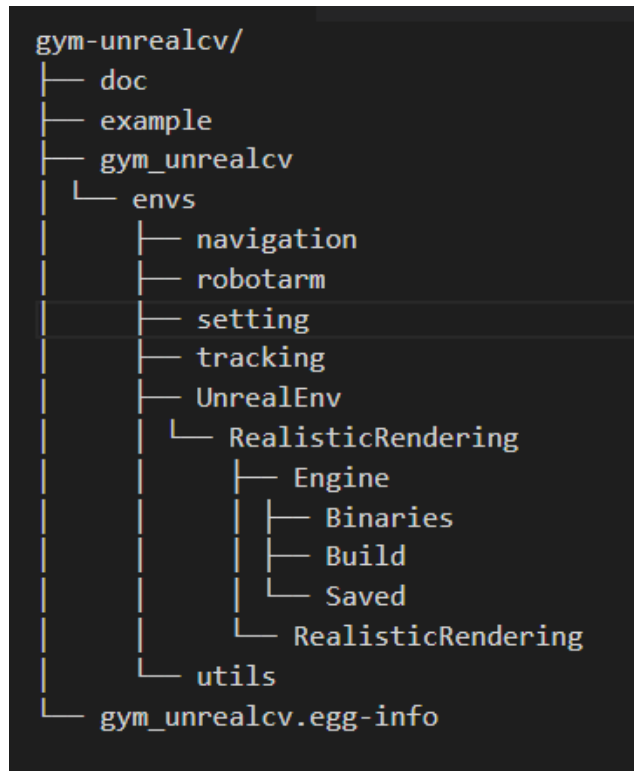
For Windows

- Clone the repo and install gym-unrealcv library

```
git clone https://github.com/zfw1226/gym-unrealcv.git
cd gym-unrealcv
pip install -e .
```

- Download the Environments for Windows from [http://docs.unrealcv.org/en/master/reference/model\\_zoo.html](http://docs.unrealcv.org/en/master/reference/model_zoo.html)
  - Unzip the file
  - If we take RealisticRendering Environment for example. Move the files in **RealisticRendering/WindowsNoEditor** to **RealisticRendering**
  - Delete the **WindowsNoEditor** folder
  - Place the **RealisticRendering** folder in **gym\_unrealcv\envs\UnrealEnv** folder

- Folder structure should look like this



- In `gym_unrealcv\envs\setting\searching\RealisticRoom.json`, change the `env_bin` path to `RealisticRendering\RealisticRendering\Binaries\Win64\RealisticRendering.exe`

- To run

```
python example\random\random_agent.py -e  
UnrealSearch-RealisticRoomDoor-DiscreteColor-v0
```