

Instructions for Windows OS

1. Install python

[Python Download link](#) (python3 is preferred)

You can check if you installed it or not by typing following in the command console:

```
python --version
```

If you've already installed it, it'll show the current version of it.

2. Install Pip (It's used to install other dependencies)

(1) First check if Pip is already installed, run following command in the command console:

```
pip --version
```

If Pip responds, then Pip is installed; if there's an error saying this could not be found then it isn't.

(2) Before installing Pip, you'll need to download [get-pip.py](#). You can download the file to anywhere but remember where it's been saved.

(3) Then launch windows command line:

- Press Windows Key + X.
- Click on "Run."
- Type in "cmd.exe" and hit enter.

Alternatively, type "cmd.exe" in the Windows search bar and click on "Command Prompt."

(4)

Open the Command Console if it isn't already open. Under the Windows command console, `cd` is the function to change directories. Use `cd` followed by a directory to navigate to the `get-pip.py` file.

To install PIP type in the following:

```
python get-pip.py
```

PIP should install itself. After installing it, you can check the version of pip by doing step1.

3. Install pygame, numpy and Cython

```
pip install pygame
```

```
pip install numpy
```

```
pip install Cython
```

4. Install kivy (we need gstreamer, glew, sdl2)

- Install the dependencies

```
python -m pip install --upgrade pip wheel setuptools
python -m pip install docutils pygments pypiwin32 kivy_deps.sdl2==0.1.22 kivy_deps.glew==0.1.12
python -m pip install kivy_deps.gstreamer==0.1.17
python -m pip install kivy_deps.angle==0.1.9
```

- install kivy

```
python -m pip install kivy==1.11.1
```

- (Optionally) Install the kivy examples

```
python -m pip install kivy_examples==1.11.1
```

Now you should now be able to import kivy in python.

5. Link MATLAB and Python

[Install MATLAB Engine API for python](#)

Open the python folder (inside the MATLAB) in the command console,

```
cd "matlabroot\extern\engines\python"
```

Then execute the python file,

```
python setup.py install
```

6. Common circumstances that would happen

Note: If you encounter any **permission denied** errors, try opening the [Command prompt as administrator](#) and try again.

If you have multiple versions of MATLAB installed on your computer, I recommend that you only keep only one version to avoid potential issues.

7. Run main.py of car3D

After finishing above steps, now you should be able to compile the main.py for car3D. Using *cd* to the car3D folder in the command console and simply do

```
python main.py
```