**Steps to install Genesis AI**

**The following steps were followed to avoid the following error:**

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1. **Create the Anaconda Environment:**

conda create -n total\_robotics python=3.10 -y

conda activate total\_robotics

1. **Install core dependencies:**

pip install taichi gym numpy matplotlib

conda install git

1. **Install Microsoft C++ Build Tools:**

3.1. Go to the official link: <https://visualstudio.microsoft.com/visual-cpp-build-tools/>

3.2. Download and run the installer for "Build Tools for Visual Studio".

In the installer:

* + 1. Select *C++ build tools*

3.2.1.1. Under it, make sure the following workloads are selected:

i. MSVC v14.x (e.g., MSVC v143 for VS 2022)

ii. Windows 10 SDK (or Windows 11, depending on system)

iii. CMake tools for Windows (optional but useful)

**Install**

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1. **Install a Few Required Packages:**

conda install -c conda-forge pybind11

conda install -c conda-forge eigen

1. **Run vcvars64.bat File:** Go to the location as shown in the picture below and run the vcvars64.bat file by double click. [[Source](https://github.com/nerfstudio-project/gsplat/blob/5fc940b648e32218ba0979355d7e4d7910f54476/docs/INSTALL_WIN.md)]

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1. **Install gsplat:**

git clone --recursive <https://github.com/nerfstudio-project/gsplat.git>

cd gsplat

pip install .

cd..

1. **Install Wheel:**

pip install --upgrade pip setuptools wheel build

1. **Install PyTorch:**For CPU-only (since you're starting with CPU):

conda install pytorch torchvision torchaudio cpuonly -c pytorch

To use GPU (and have a compatible GPU):

conda install pytorch torchvision torchaudio pytorch-cuda=11.8 -c pytorch -c nvidia

1. **Change sympy version:**

Pip uninstall sympy

pip install sympy==1.13.1

1. **Finally install Genesis:**

git clone https://github.com/Genesis-Embodied-AI/Genesis.git

cd Genesis

pip install -e ".[dev]"

1. **Check the Installation:**

Open the file, check\_genesis\_instalation\_status.ipynb in Jupyter Notebook and run. There should not be any errors when executed.

1. **Run Simulation:**

To run any simulation properly, the IDE needs to be opened from the Anaconda prompt.

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Open the test file, run\_test\_sim\_robot\_arm.py in Spyder, and run.