

如何对角色进行标点 (一个角色大致 5~10 分钟)

步骤一：

打开 Blender 角色文件



步骤二：

点击 scripting 选项并将 Python 代码复制粘贴至此 (运行代码请按“播放键”)

```
Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Geometry Nodes Scripting + Scene
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1 Start 1 End 250

import bpy
import bmesh
import json

# Ensure in edit mode with selected vertices
obj = bpy.context.active_object
if obj and obj.type == 'MESH':
    # Step 1: Get selected vertex indices in Edit Mode
    bpy.ops.object.mode_set(mode='EDIT')
    bm = bmesh.from_edit_mesh(obj.data)
    selected_indices = [v.index for v in bm.verts if v.select]

    if not selected_indices:
        print("no selected")
    else:
        # Step 2: Switch to Object Mode to access vertex coordinates
        bpy.ops.object.mode_set(mode='OBJECT')
        mesh = obj.data
        landmark_dict = {}
        index_dict = {}

        for i, index in enumerate(selected_indices):
            coord = list(mesh.vertices[index].co)
            name ="right_back_foot"
            landmark_dict[name] = coord
            index_dict[name] = index

        # Save to JSON
        output_path = "E:/landmark_based_SMPL_fitting/index/temp.json"
        with open(output_path, "w") as f:
            json.dump(landmark_dict, f, indent=4)

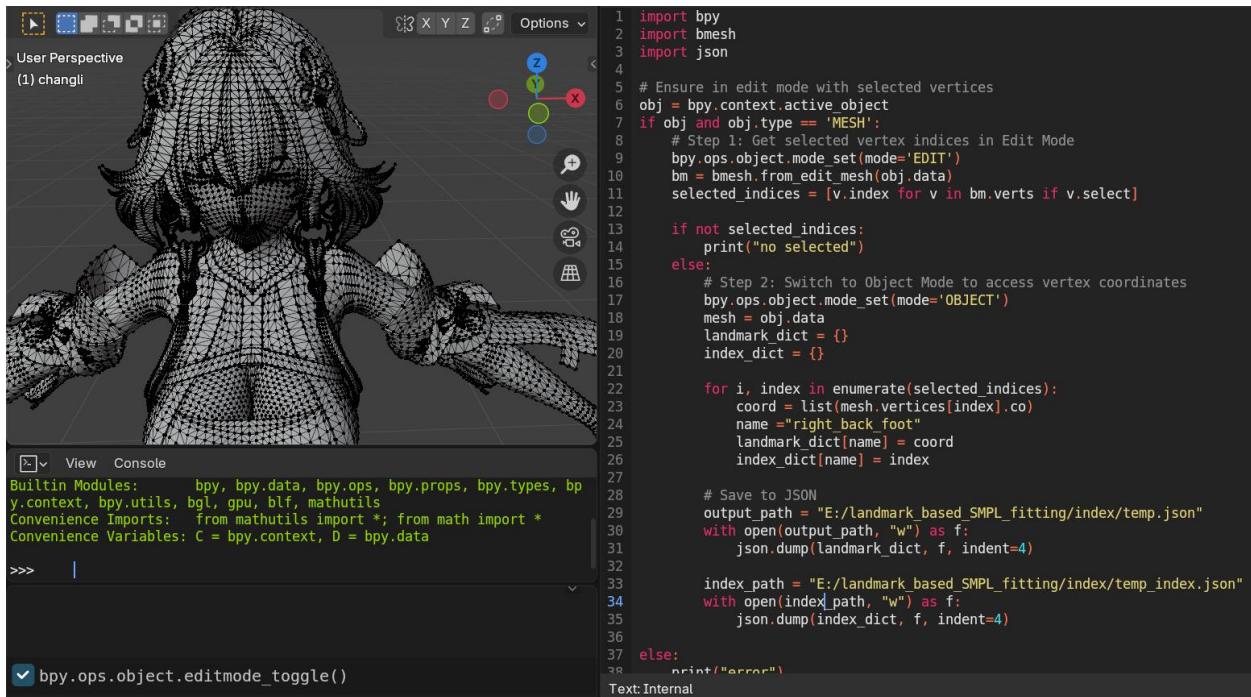
        index_path = "E:/landmark_based_SMPL_fitting/index/temp_index.json"
        with open(index_path, "w") as f:
            json.dump(index_dict, f, indent=4)

else:
    print("error")
```

The code is a Python script designed to mark specific landmarks on a character model. It first ensures the object is in edit mode with selected vertices. Then it switches to object mode to access vertex coordinates. It defines two dictionaries: 'landmark_dict' for vertex coordinates and 'index_dict' for vertex indices. It iterates through the selected indices, extracting the coordinates of each vertex and associating them with a specific name (e.g., 'right_back_foot'). Finally, it saves both the landmark and index dictionaries to JSON files.

步骤三：

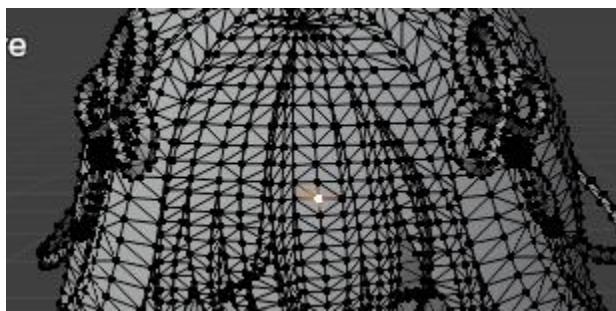
在窗口按 Tab 进入编辑模式之后，可以看见角色网格



步骤四：

点击角色位置为角色标点，然后运行代码脚本（记得自己修改输出路径和文件名称!!!）

每次标点的位置和相应的身体部分命名方式请参考视频



步骤五：

运行代码之后，输出得到两个文件（一个包含 vertex coordinate，一个包含 vertex index）。因为每一次只会输出一个点，所以请复制这一步骤的结果到最终输出的文件里！并在完成后将文件名称改为角色名称以方便记认

例如：Monkey_coor.json 和 Monkey_index.json

```

temp_index.json
...
E: > landmark_based_SMPL_fitting > index > temp_index.json > ...
1 {
2   "right_back_foot": 27354
3 }

temp.json
...
E: > landmark_based_SMPL_fitting > index > temp.json > ...
1 [
2   "right_back_foot": [
3     0.003840999910607934,
4     1.6260149478912354,
5     0.06256300210952759
6   ]
7 ]

```

(每次输出一个结果)

```

1 {
2   "left_chest": 4167,
3   "middle_chest": 5621,
4   "right_chest": 6911,
5   "middle_middle_chest": 5938,
6   "left_waist": 3295,
7   "right_waist": 6058,
8   "middle_waist": 5943,
9   "left_back": 5463,
0   "middle_back": 5350,
1   "right_back": 8197,
2   "middle_middle_back": 5487,
3   "left_down_back": 5490,
4   "middle_down_back": 4297,
5   "right_down_back": 8219,
6   "front_left_head": 2161,
7   "front_right_head": 3173,
8   "top_head": 9009,
9   "back_left_head": 2027
0

temp.json
...
1 [
2   "left_chest": [
3     0.11024337261915207,
4     0.09216097742319107,
5     0.027973385527729988
6   ],
7   "middle_chest": [
8     4.6415129872912075e-06,
9     0.09672706574201584,
10    0.04015190526843071
11  ],
12   "right_chest": [
13     -0.09274916350841522,
14     0.0899823009967804,
15     0.03234754875302315
16  ],
17   "middle_middle_chest": [
18     2.5996509975811932e-06,
19     0.03514011226594448
20 ]

```

(在每次点完一个点之后，复制并粘贴到最后的完整文件中)