MMD Clothing to VaM

By Anonymous :)

This is **NOT** a guide to importing a full body to Virt-a-Mate from an MMD model. This is for clothing.

You will want a basic understanding of Blender too. This guide will not teach you how to pivot your camera or zoom in and out.

Prerequisites:

- Daz Studio
- Blender 3.0
- MMD Tools from https://github.com/UuuNyaa/blender_mmd_tools/releases/download/v1.0.2/mmd_tools-v1.0.2.zip

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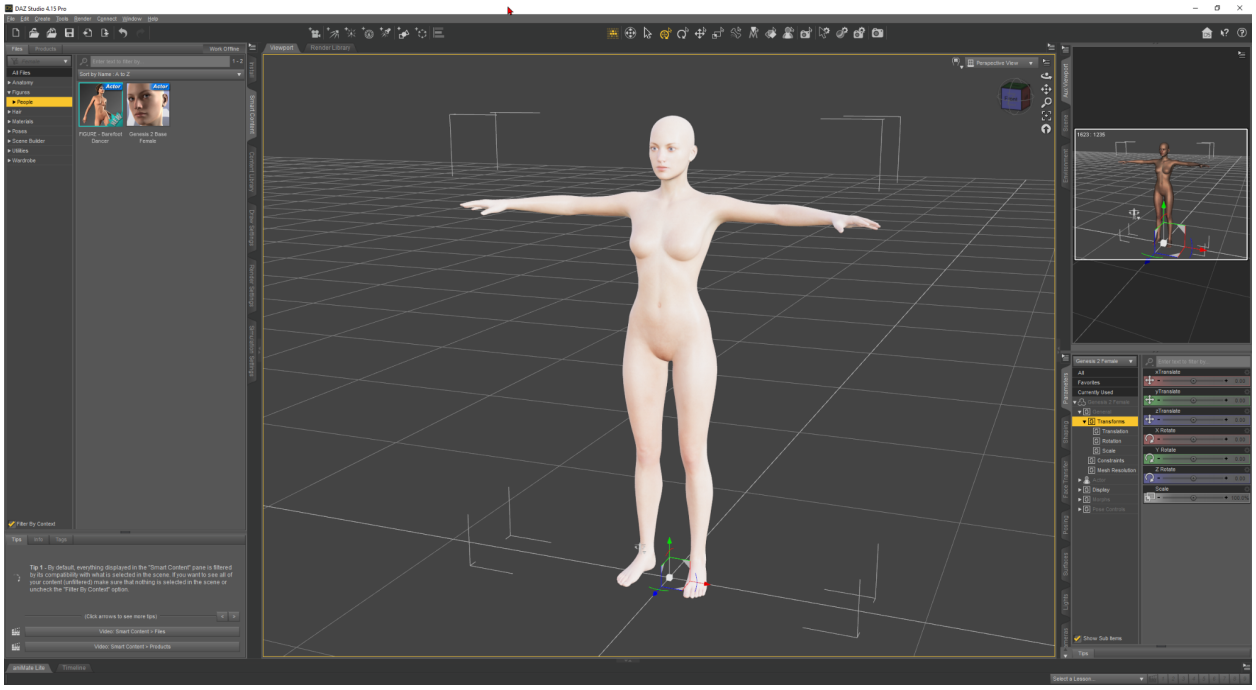
Daz Studio Export

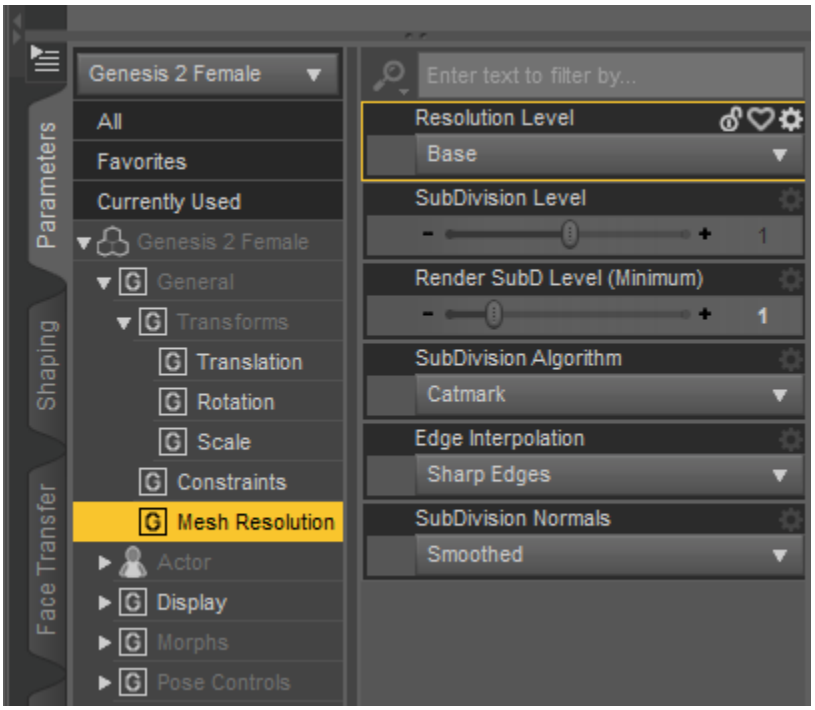
You'll only need to do this once. Once you have a G2F model in Obj format, you can use it over and over within Blender.

Install the Genesis 2 starter pack within Daz

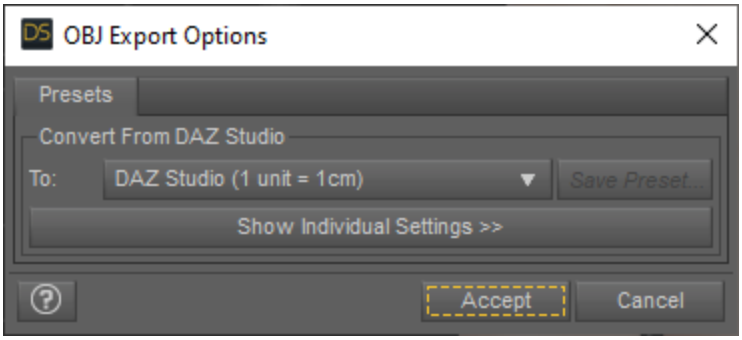
Under the Files tab, left of Products, go into Figures-People-Genesis 2 Essentials. Double click Genesis 2 Base Female



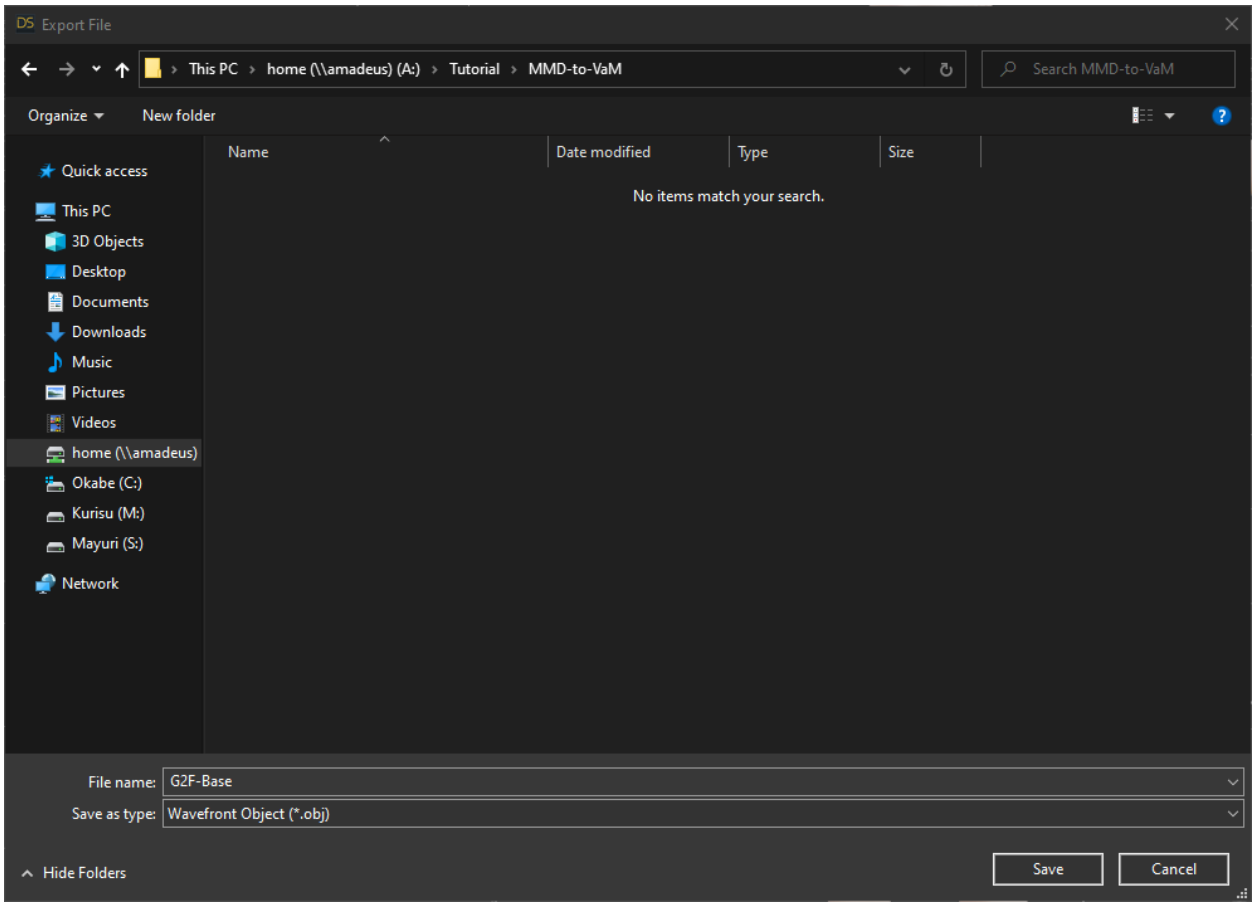
On the bottom right, Parameter tab, change Resolution Level to Base (this will help later with Wrap2020/2021 for full body conversion)



With the model selected, File-Export.
IMPORTANT Select “To: Daz Studio (1cm = 1cm)”. Accept.



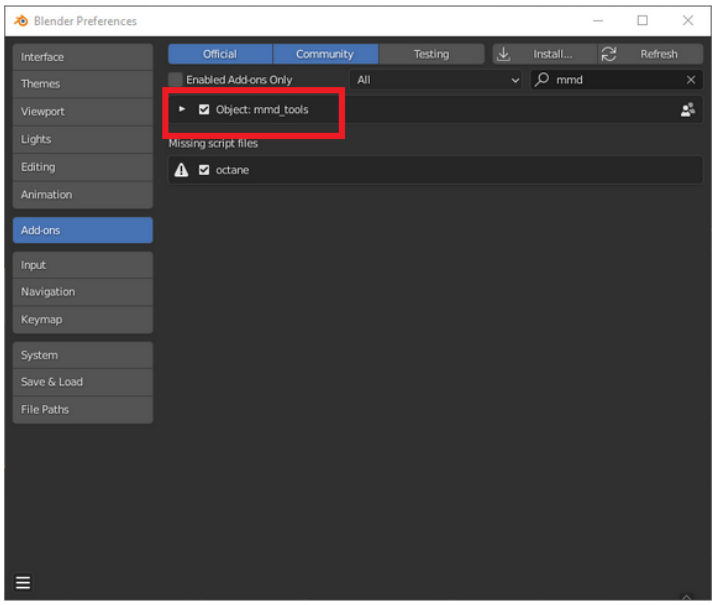
Save somewhere as an OBJ file.



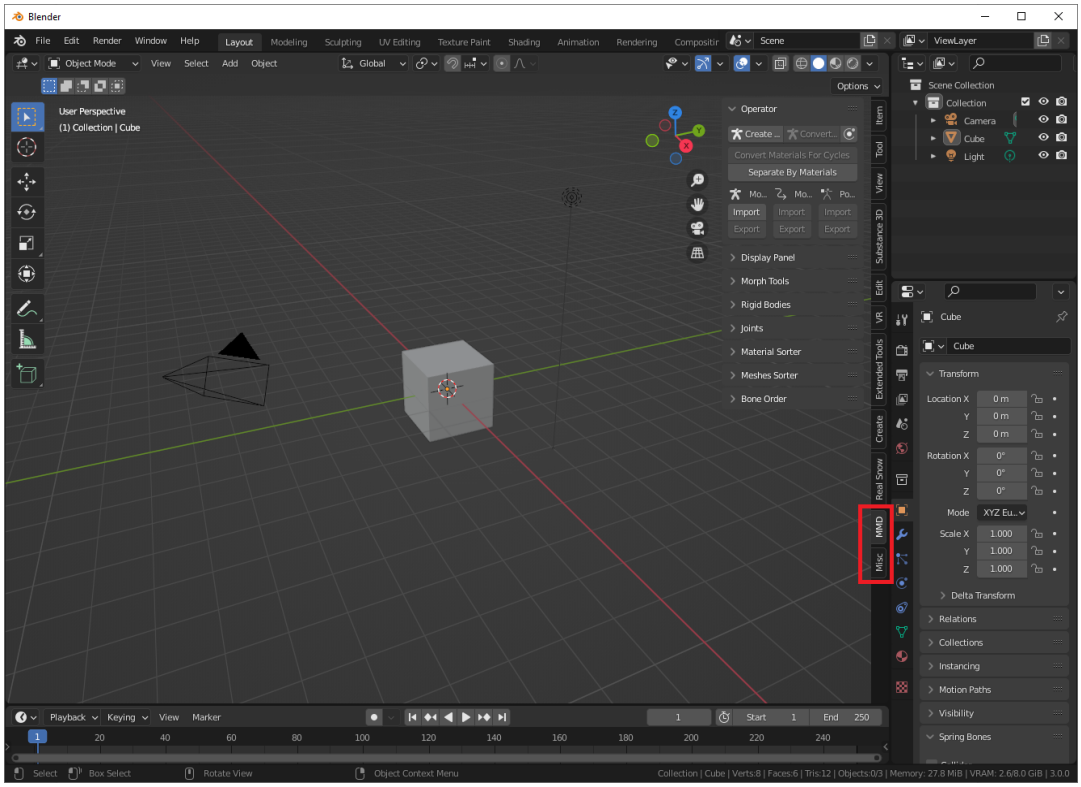
You can either keep Daz open in a new blank project or close it and move forward to the Blender setup.

Blender Setup

Open a new Blender instance. Top left, go to Edit-Preferences-Add Ons. Install. Find the mmd_tools-v1.0.2.zip you downloaded and select. Check off the addon within Blender as seen below.



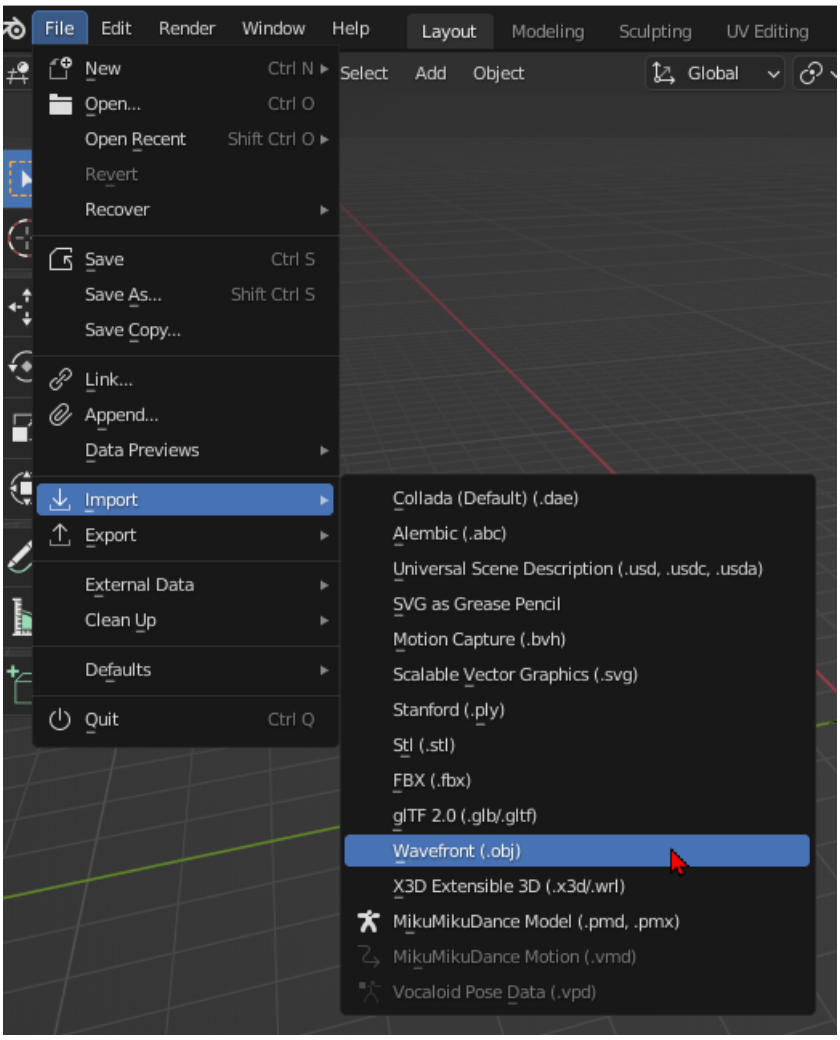
In the Blender viewport, press “N” to show the right bar. Mine will have additional items, you don’t have to worry, just make sure MMD and Misc is there. If not, you may have to restart Blender.



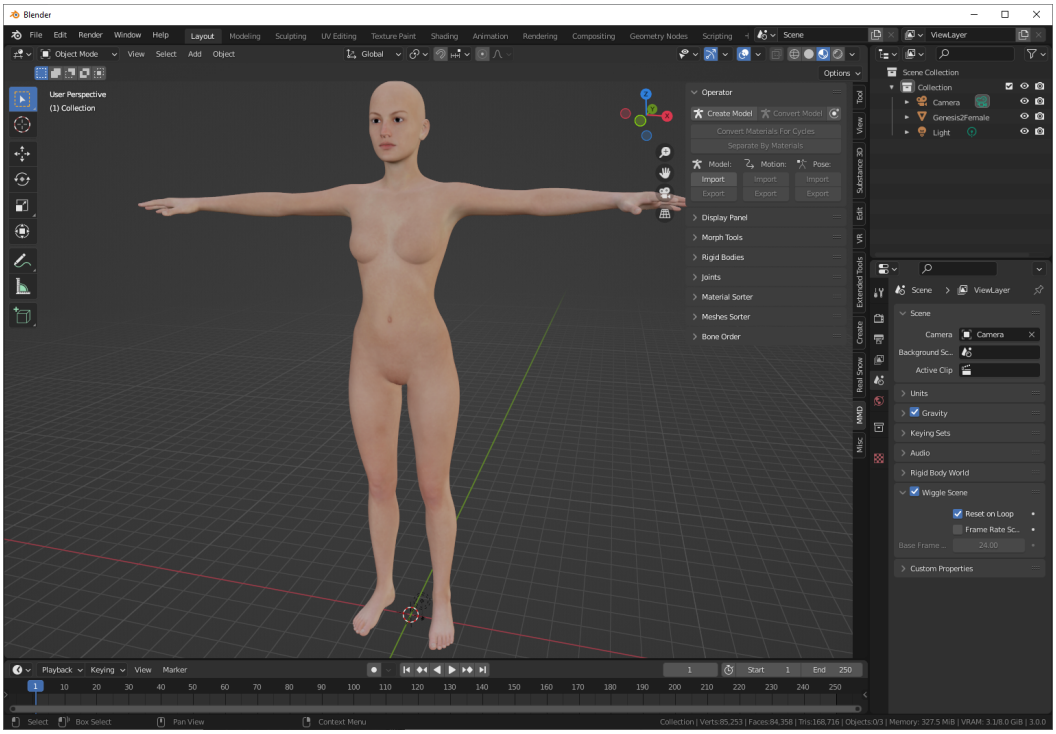
MMD Import to Blender

The default, non-morphed model for VaM is the Genesis 2 Female (G2F), so for this basic tutorial, we will use it as a reference to scale our clothing to.

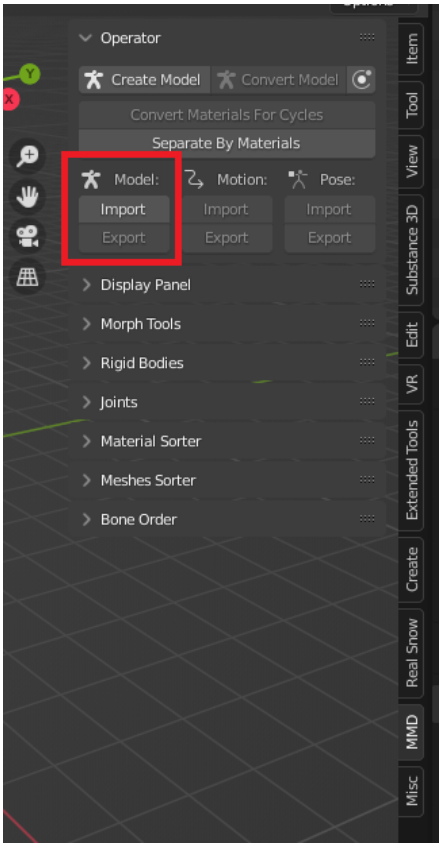
Within Blender, import the Genesis 2 Female base model. Top left, File-Import-Wavefront(.obj)



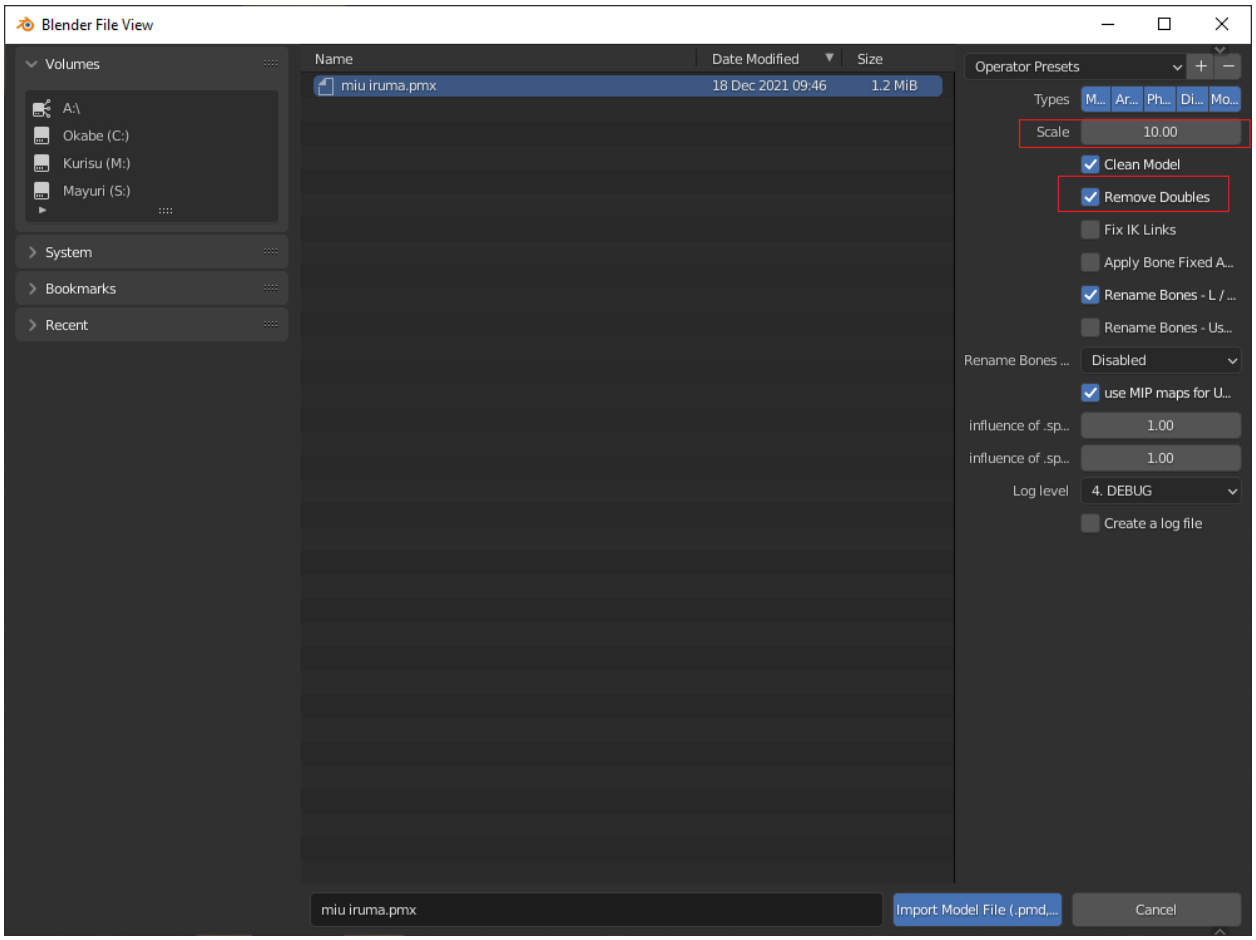
Model will be massive, that's okay. Zoom out the camera a bit. Switch to Material Preview by pressing "Z" and select Material Preview.



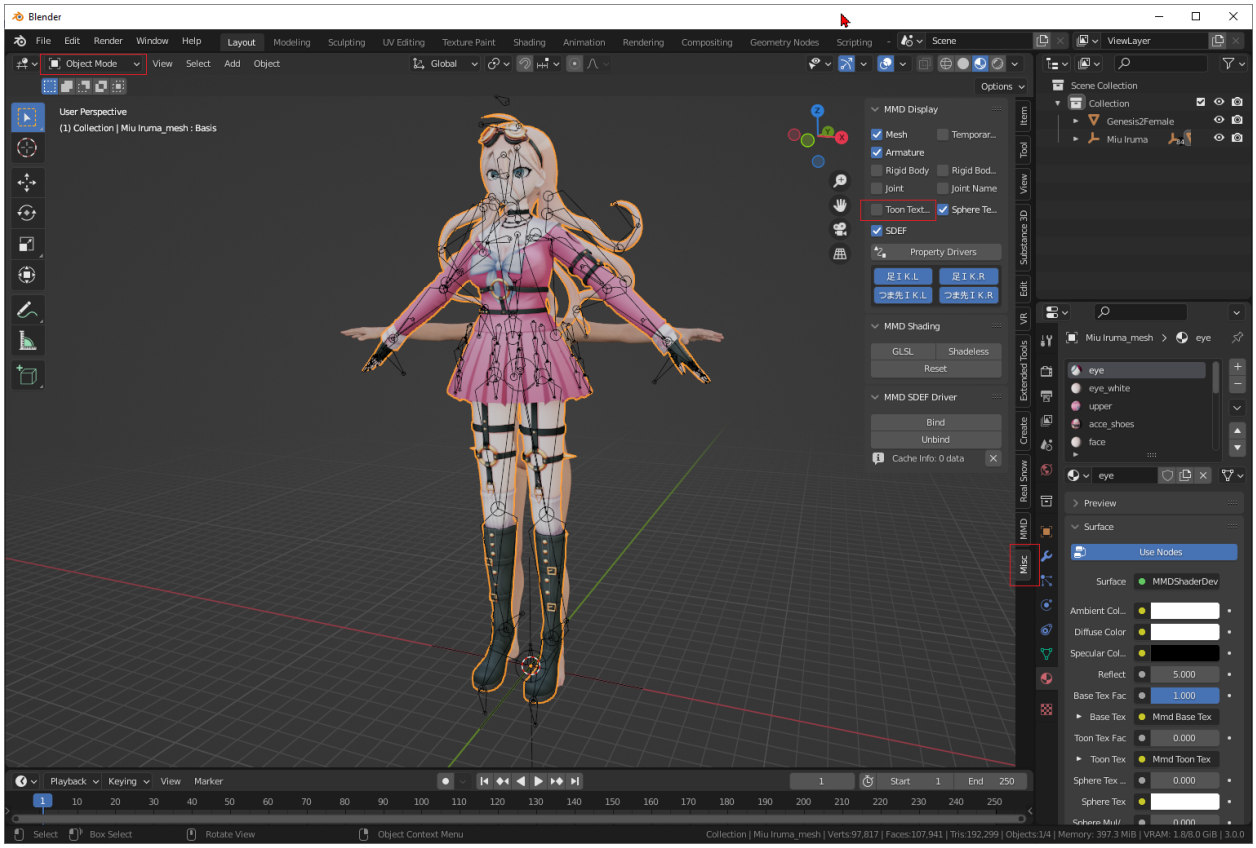
In the MMD side bar within Blender, select Import under the Model field.



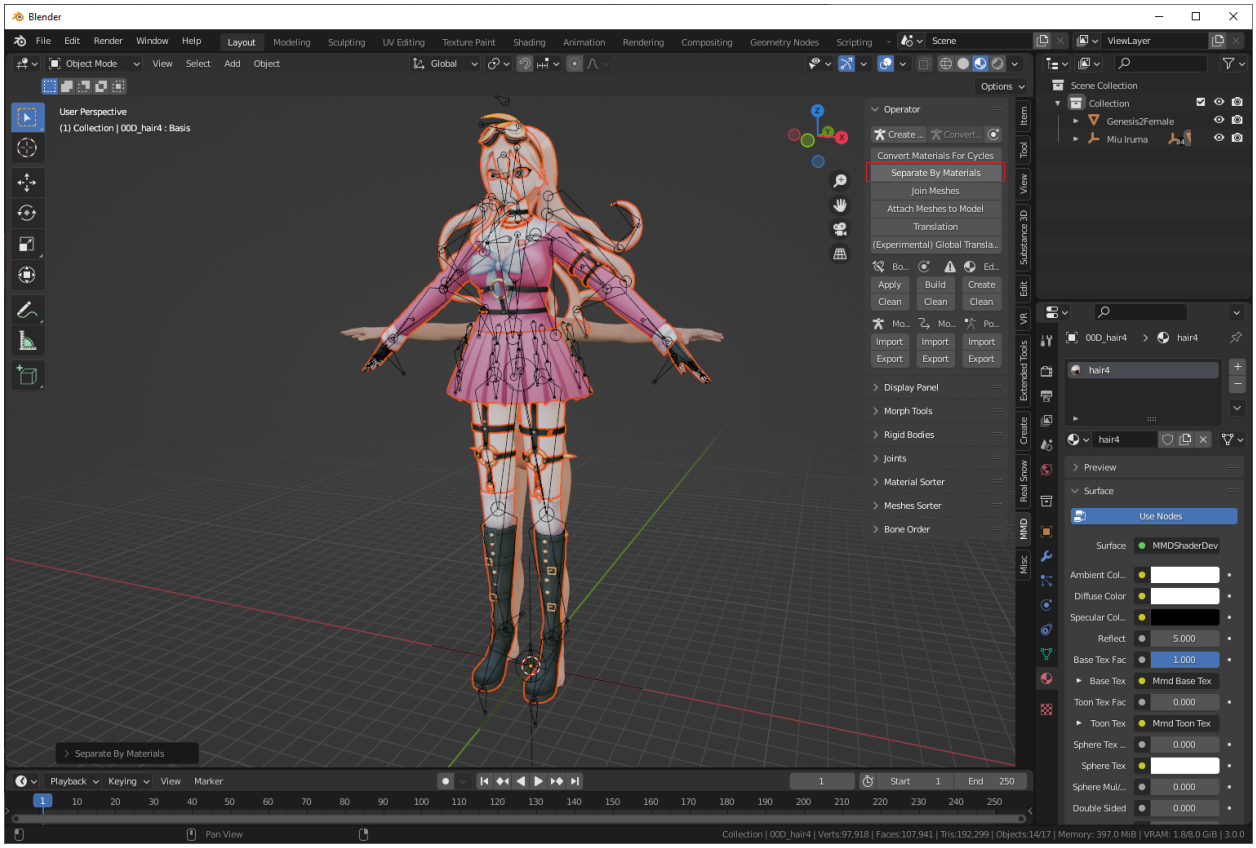
Select your model, must be in .pmx or .pmd format. Set scale to 10, and check off “Remove Doubles”.



Purple might appear on the model. This is because of the toon texture. While in Object Mode, select the mesh of the model. Inside the “Misc” tab, uncheck Toon Texture.



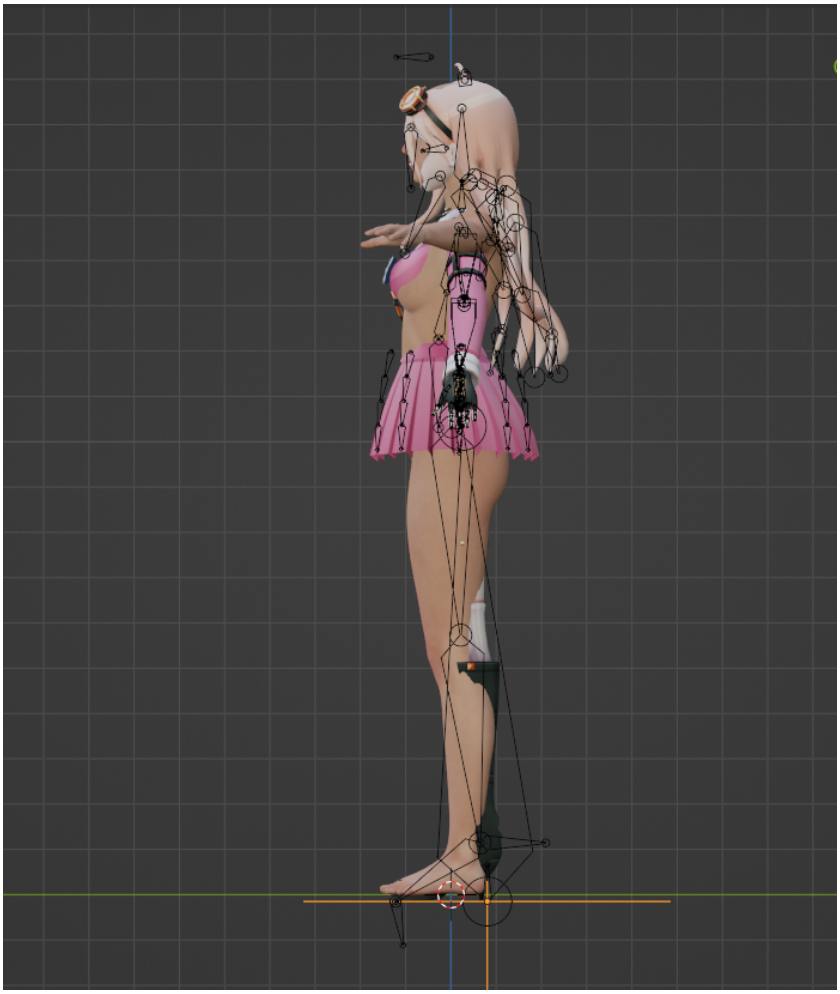
Back in the MMD tab, select “Separate by Materials”.



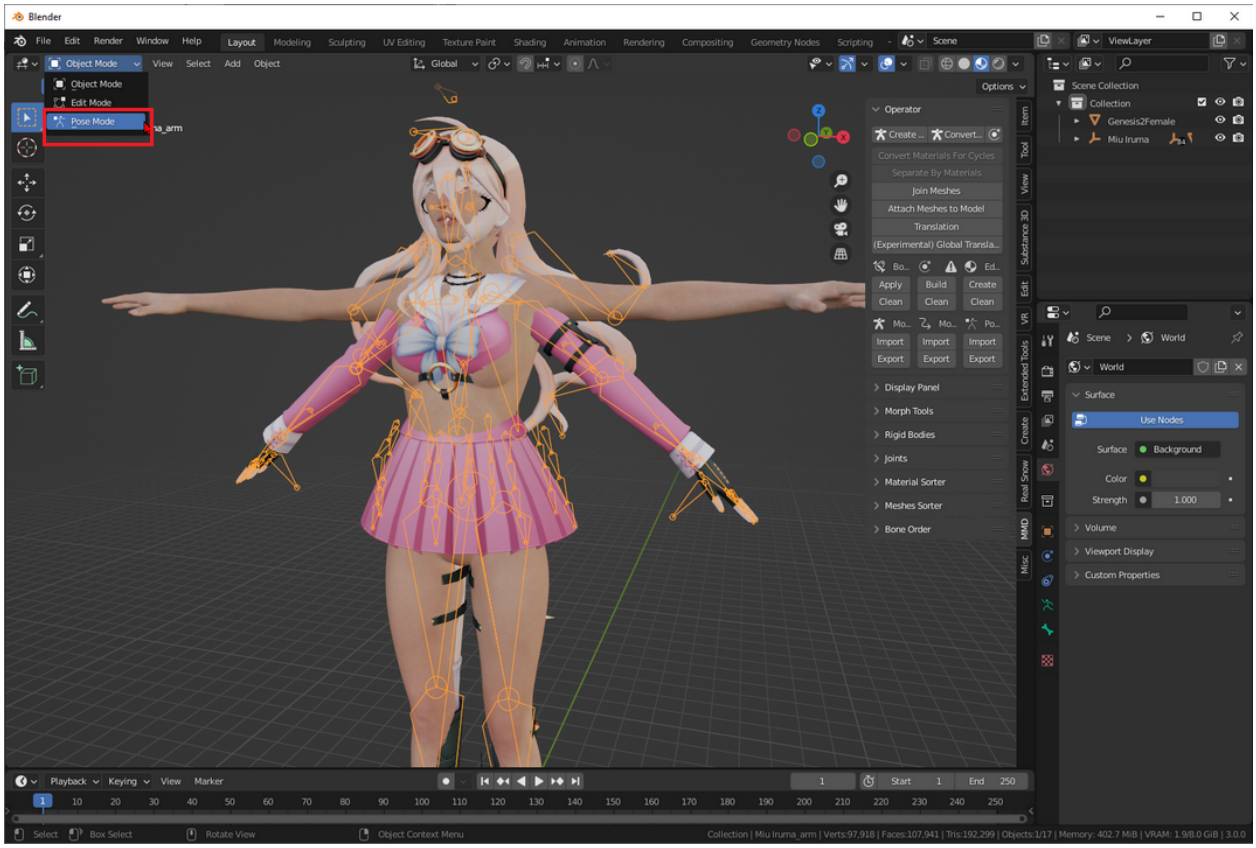
Now your mesh is a bunch of pieces. Let's work on just importing the shirt and accessories. Because the arms are not in a T-pose like the G2F model, we will need to pose the body.
First, we will scale the whole model down and move it to around where the shoulders will rest. It doesn't have to be perfect because we are going to edit the mesh directly in a bit.

In Object Mode, select the Empty near the feet of the model. Use "S" and your mouse to scale the model around. When it's a good scale, either click or use the spacebar to confirm size.
While the Empty is still selected, use the "G" hotkey to move the model around. Use the `(tilde) key to snap the camera to the right or left for a better view from the side.

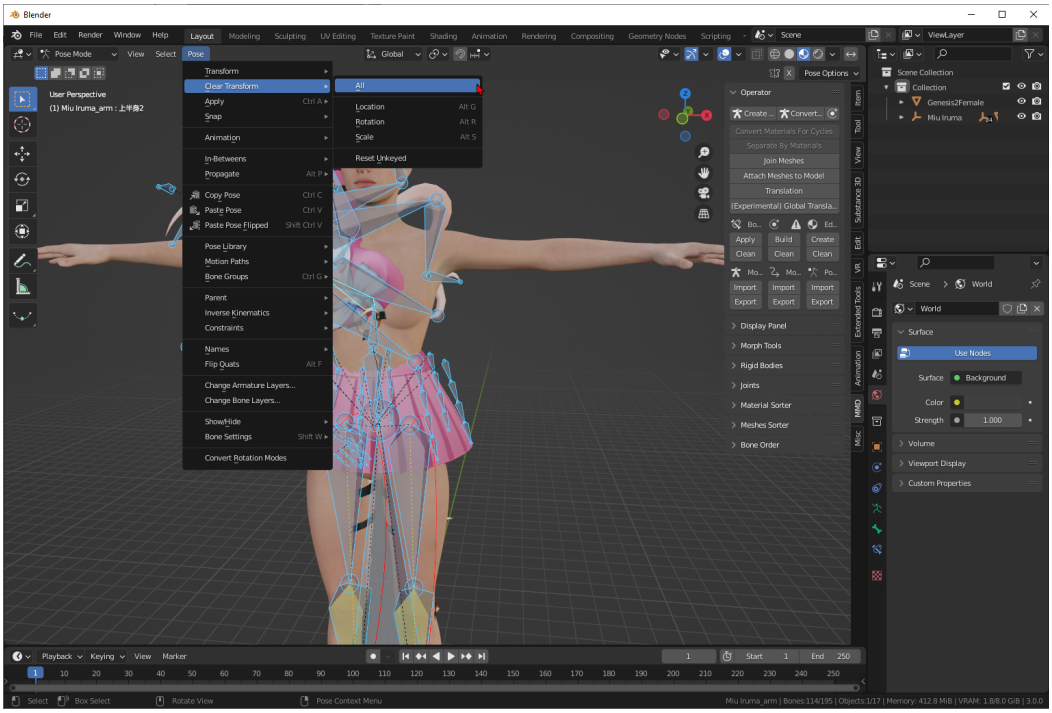
Empty

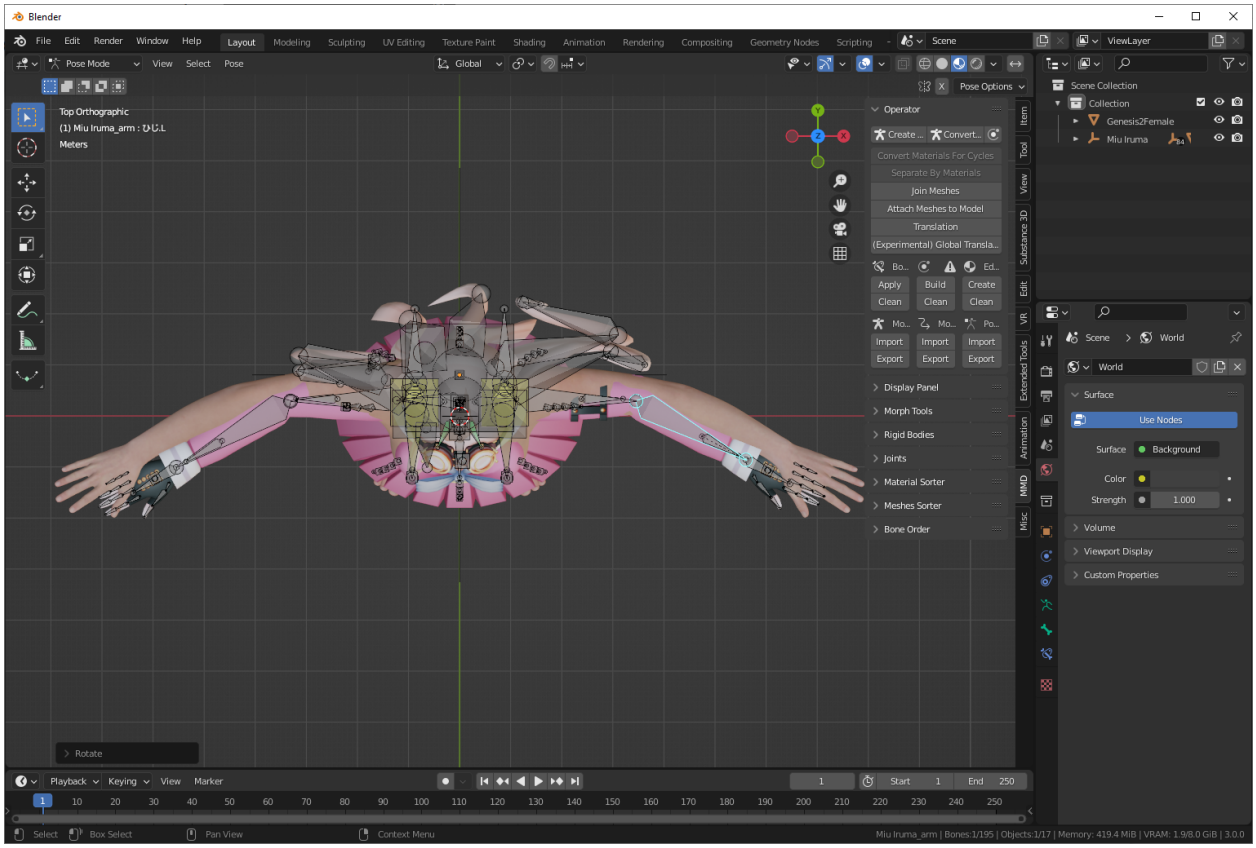


Select the Armature of the model, and go into Pose Mode. The Armature is the black skeleton-like outlines within the model.



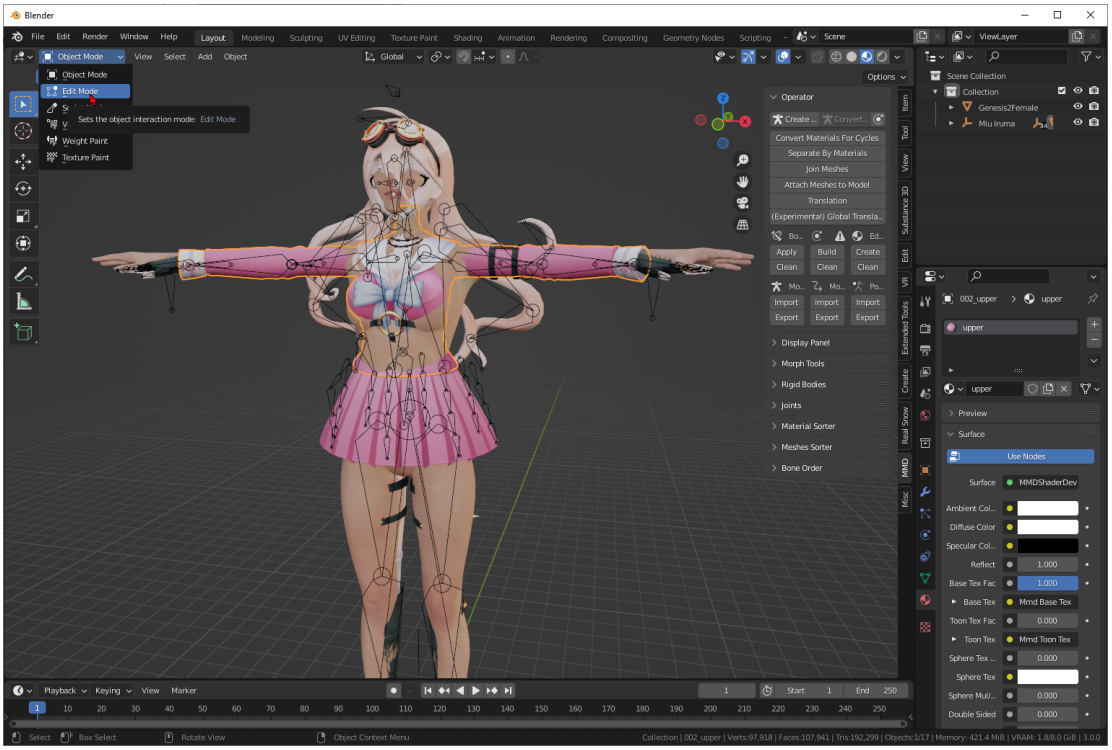
In Pose Mode, select the bones to move the clothing into a good T-pose. Remember, it doesn't have to be perfect, just enough to line up with the general structure of the arms in a T-pose instead of an A-pose.
Use the "R" key to rotate a selected bone. If you go overboard and want to start over, press 'A' to select all bones, then Pose, Clear Transform, All.



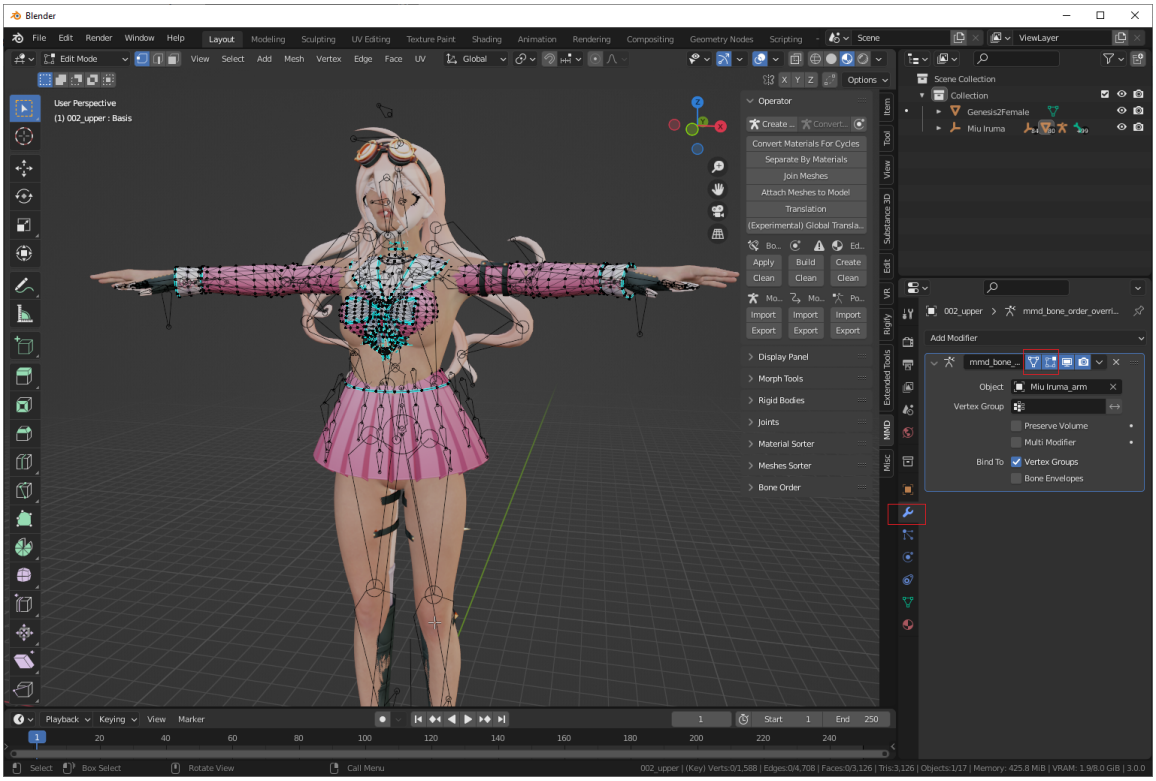


Don’t forget the top-down view! The arms are not in a perfect T-pose.

Once it looks good, come back to Object Mode. Then select the mesh you want to Edit. In this case, we will be editing the shirt. Select the mesh and switch to Edit Mode.

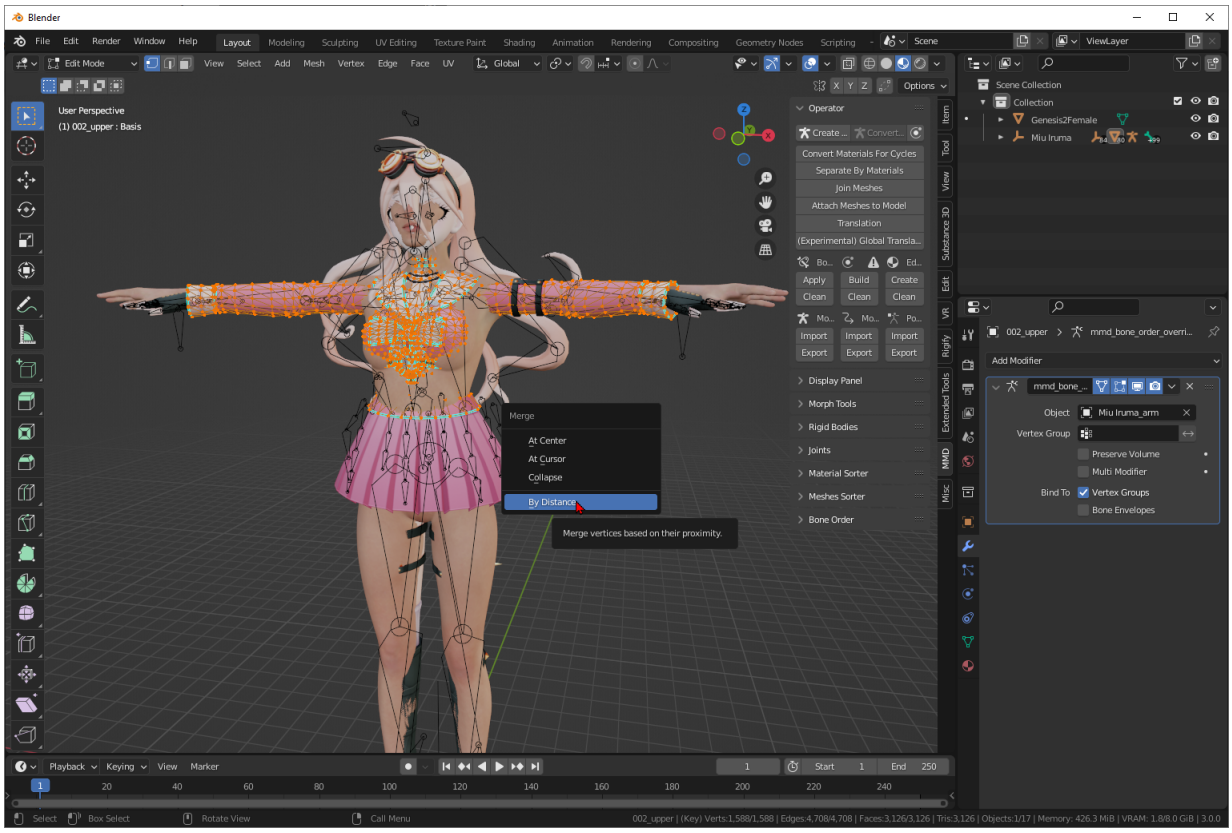


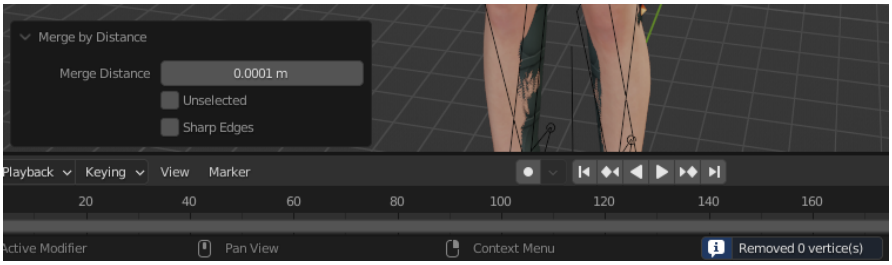
Oh no! It moved didn't it? No worry, you need to edit on the Armature modifier. Go to the bottom right side, select the Modifiers tab. Enable the "On cage" and "Edit mode" within the Armature modifier.



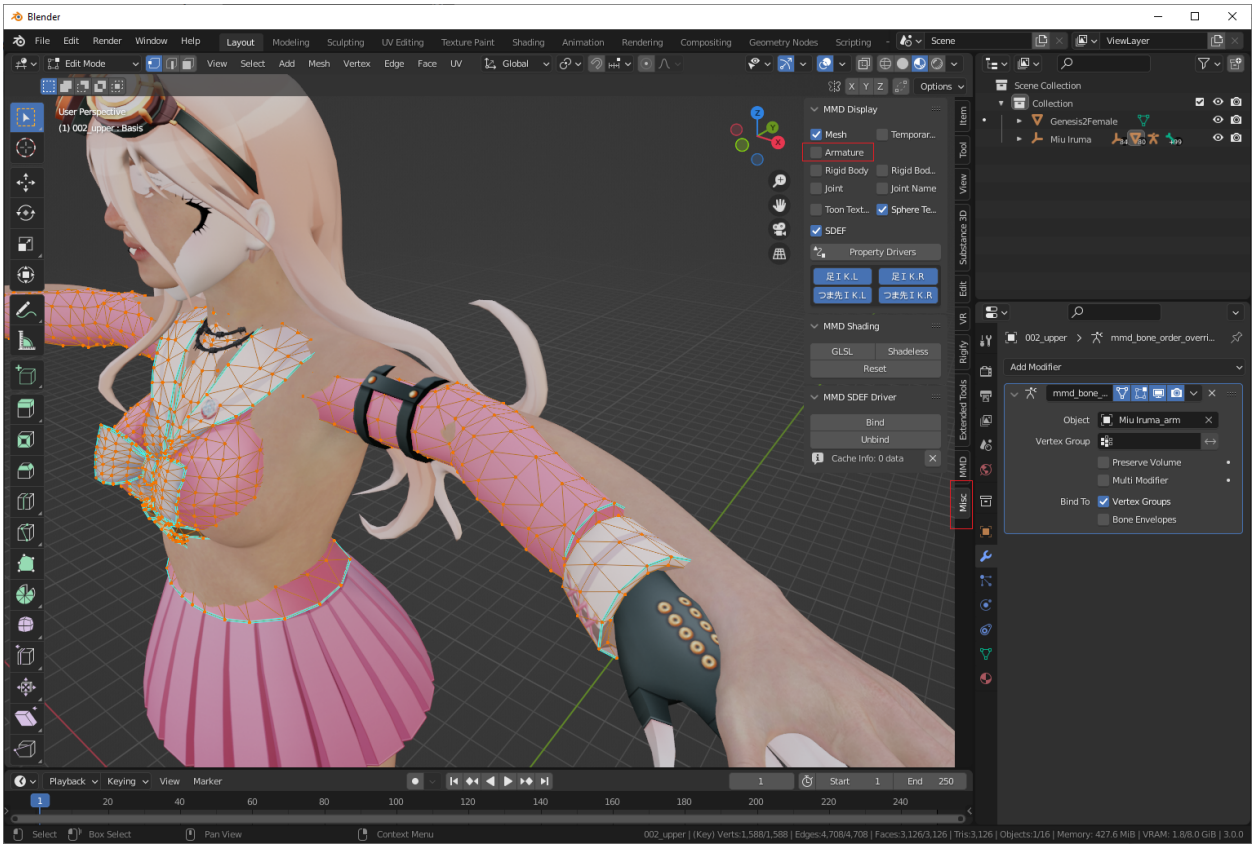
The next step is helpful sometimes for complex models where the import creates a ton of duplicate vertices for some odd reason. We can remove these based on the distance between individual vertices.

In Edit Mode, select all with ‘A’, then press ‘M’. Select “By Distance”. In this case, the mesh is not too complex, so no duplicate vertices were found/removed. You can adjust the Merge Distance to your leisure. Usually the default value will clean up duplicate vertices that are literally on top of each other and are not needed. This will save you headaches later in editing the mesh and to cut down on the # of vertices VaM has to process later.





You can disable seeing the Armature in the viewport within the “Misc” tab.

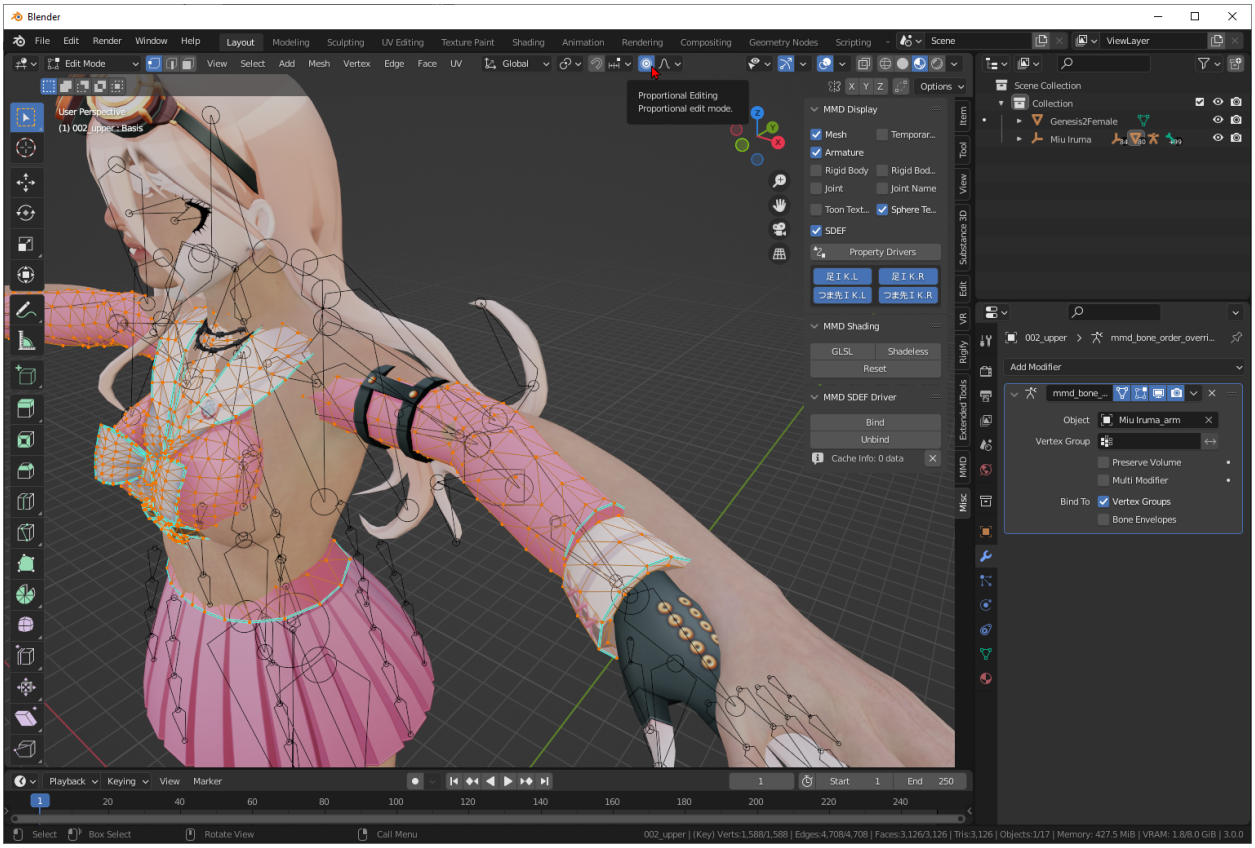


Now comes the **long** and *kinda* fun part.

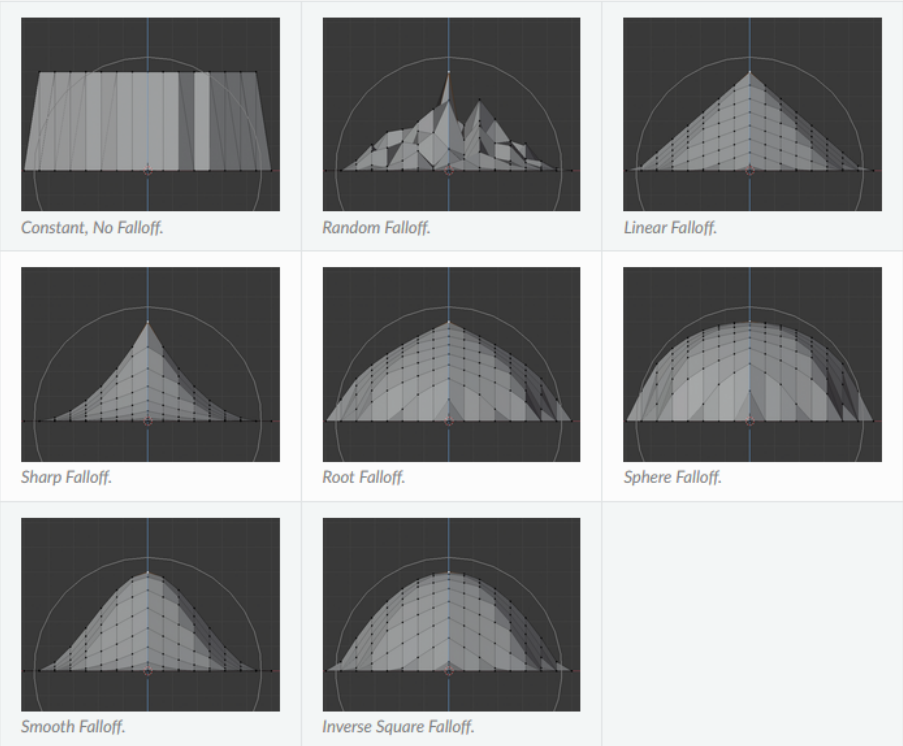
Proportional Editing

There is no easy, one button to fit the mesh, and have it come out 1:1 in VaM. Manual editing here is where most of your time will go.

On the top middle, select Proportional Editing (hotkey letter O).



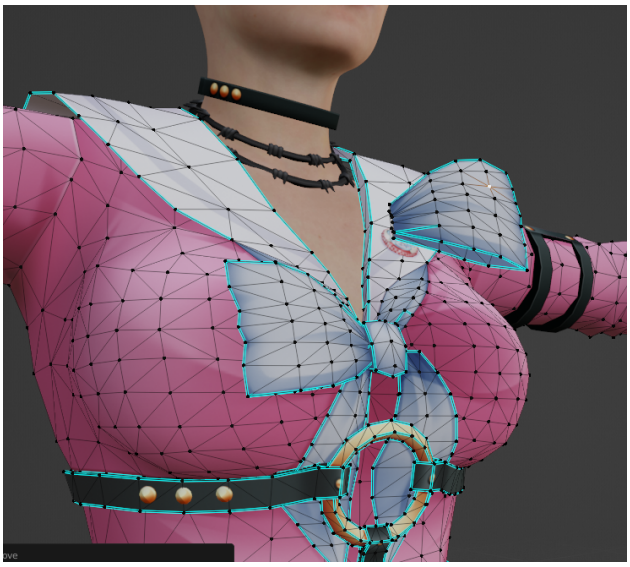
To the right of the Proportional Editing button, there's a dropdown for the falloff when editing vertices. Below are examples. I usually stick to Smooth or Sphere, depending on what piece I'm moving.



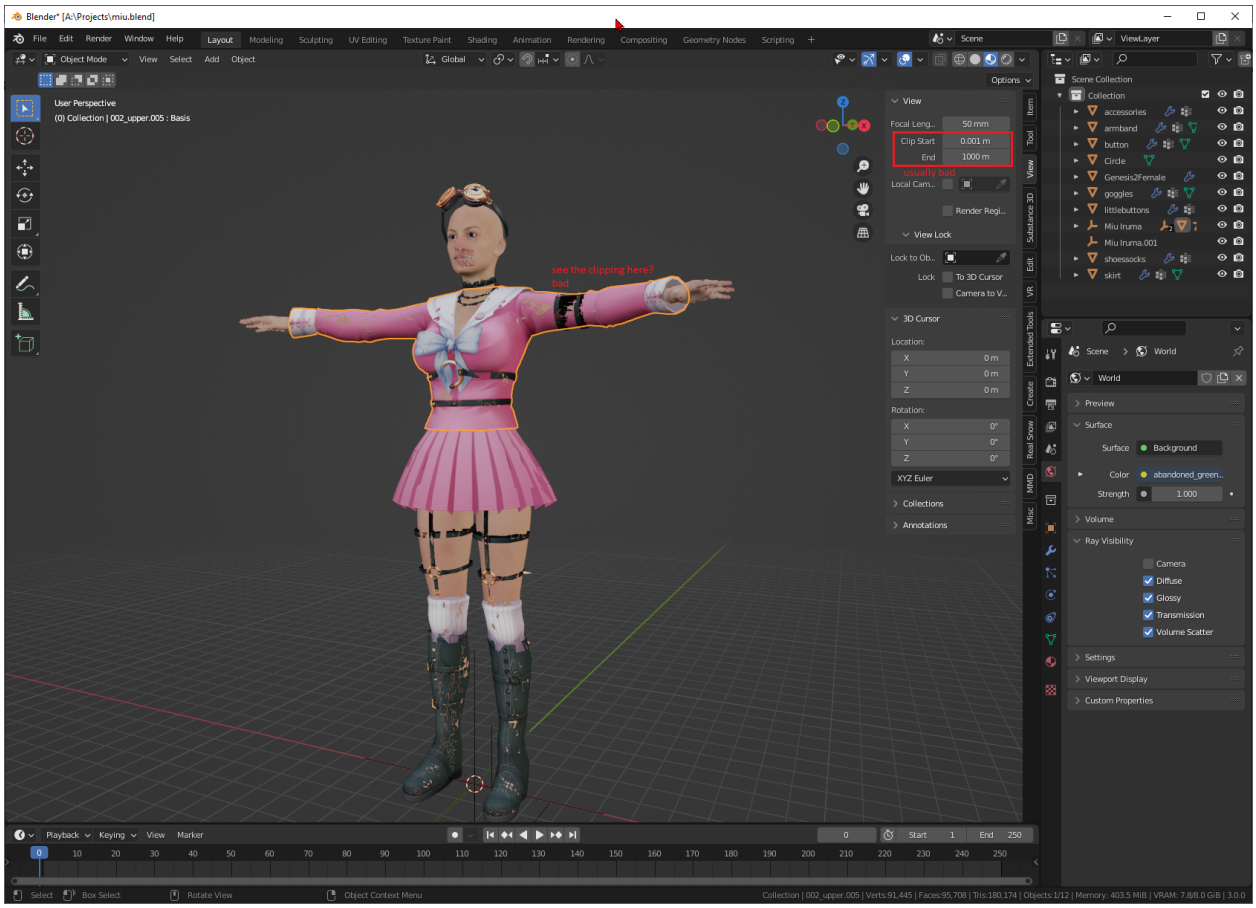
While you're still in Edit Mode, you will now move the mesh around to fit the G2F model. You can select multiple vertices while holding the Shift key. Careful while in X-Ray mode that you're moving the right vertices. Move the vertices around with the G hotkey and confirm movements with a left click or spacebar.
Press "Alt+Z" to enable X-ray.

Let's take for example, the elbow piece. It's inside of our G2F model. Let's select a vertice **with** Proportional Editing enabled. Moving it with the 'G' key, and using the scroll wheel on your mouse will change the size of the falloff.
Here's a good quick demonstration:
Blender Proportional Editing Tutorial

If your mesh is in separate pieces, you will have to figure out if you want to Proportionally Edit the entire mesh, or edit only those connected to the single item. For instance, this bow on the front is broken into multiple separate pieces within the bow mesh. I did not separate it further, but instead kept editing the whole mesh. You can separate by using the Proportional Edit Connected Only option within the dropdown, then select the separate pieces and move around as needed. This can be helpful for accessories that are baked into the mesh that you don't want to disturb by moving the shirt around.



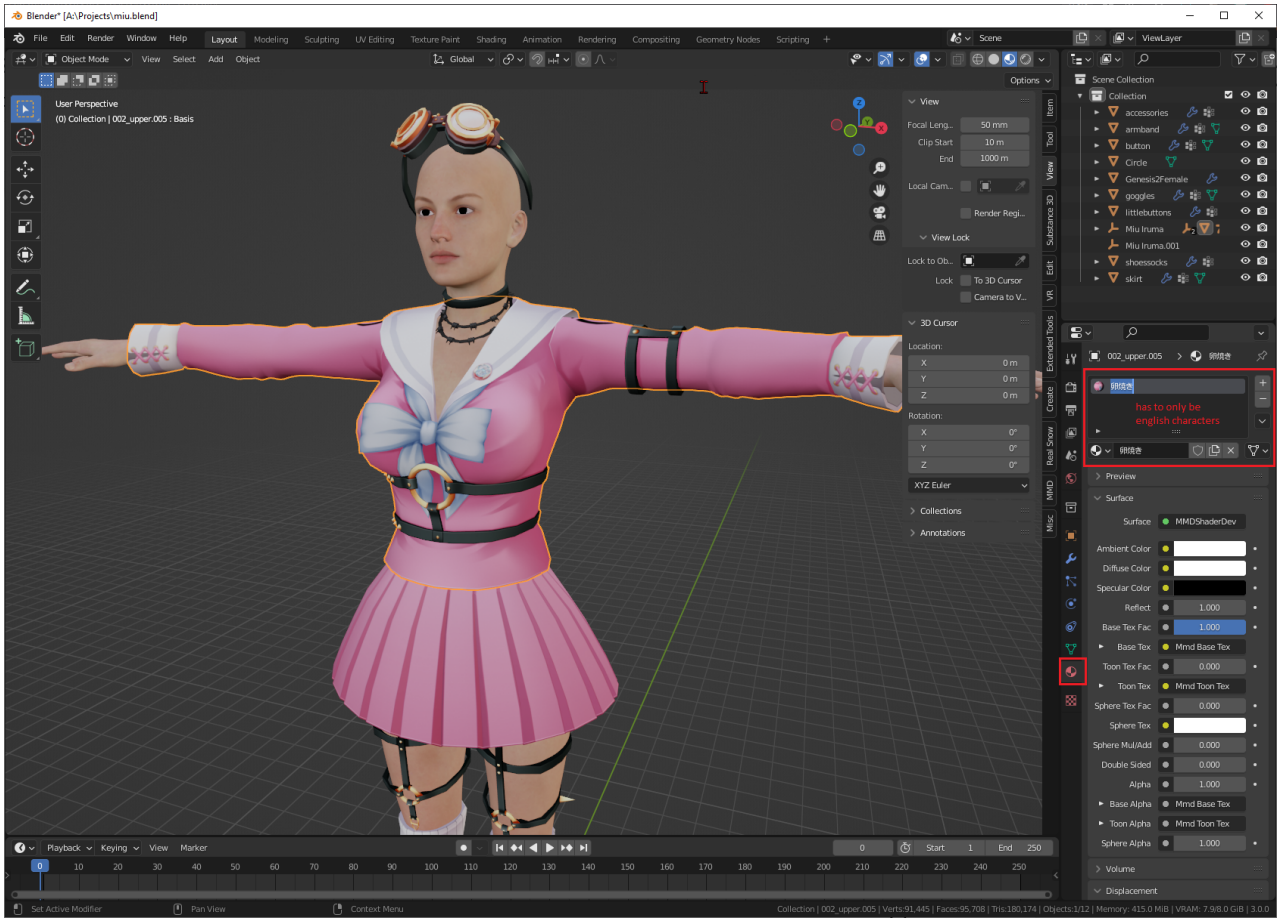
Go around your whole mesh to fit the G2F model. If you zoom out and see some odd flickering or clipping, you may need to increase your Clip distance in the View tab. Increase the Clip Start to around 10m or so. Below is an example of the clipping occurring. This does not affect your mesh, but it is annoying when you're trying to finalize a product.



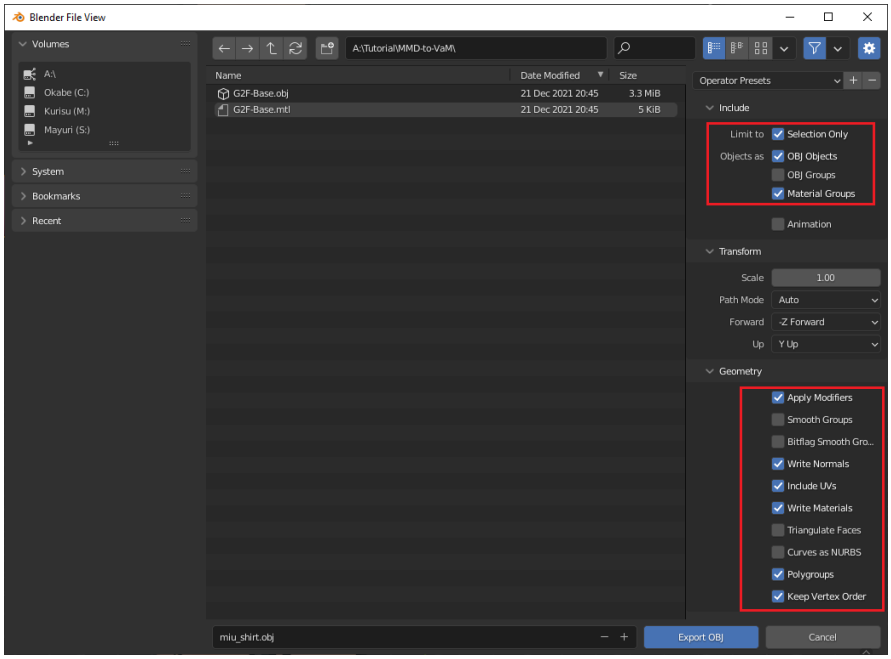
Alright, now after you've spot checked around, making sure there's no flesh clipping through your material, it's time to export! Congrats, the hard part is over.

Export Blender to DAZ

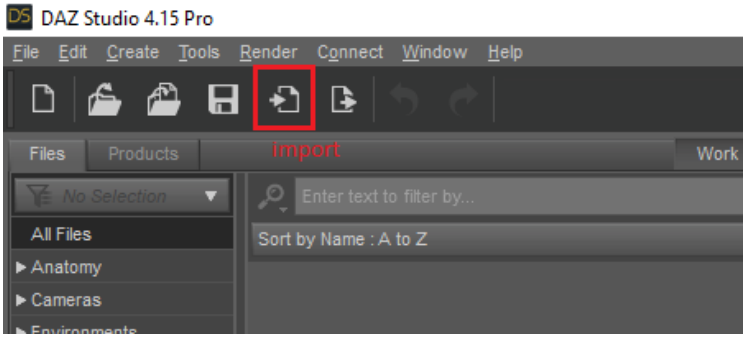
Switch back to Object Mode. Select the mesh you want to export. We will have to check if there's Japanese or any other non-English characters within the materials tab. Bottom right, Material Properties. Scroll through the entire list of materials. For instance, we have a material with the name 卵焼き. VaM will throw errors about this. Double click the name, and rename to something in English. It can be gibberish.



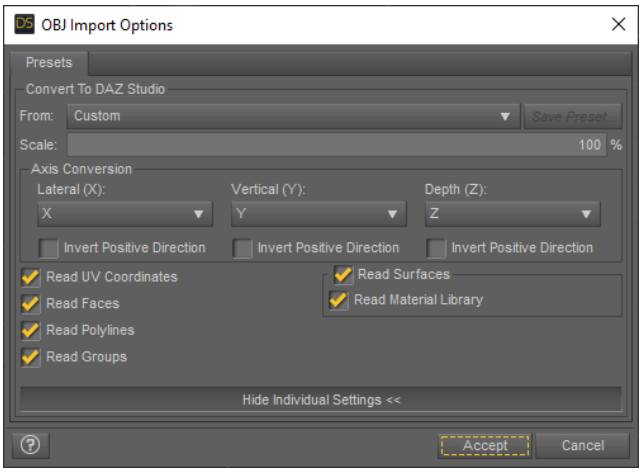
Double check your item is still selected (highlighted in orange). Now, top left, File-Export-Waveform(.obj).
On the right side, check off, Selection Only, Material Groups, Polygroups, and Keep Vertex Order. You can save this as an Operator Preset by pressing the + sign near the top right.



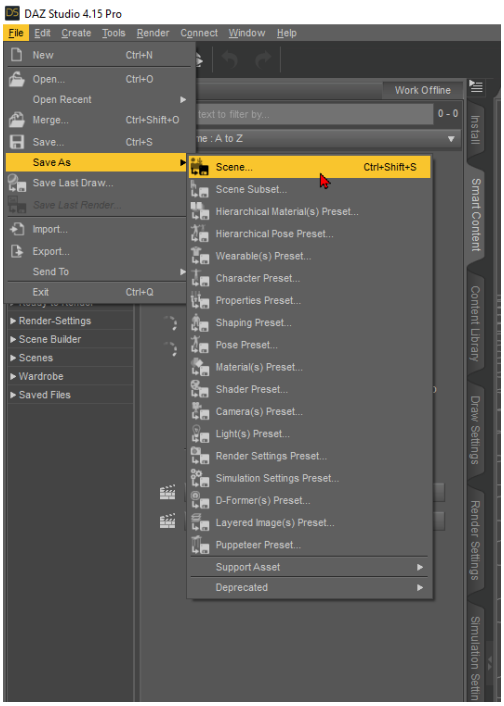
Now, open/go back to DAZ Studio. Create a new blank Scene. Import the newly created .obj.



Use the following import settings once the DAZ prompt appears after you select the obj model.



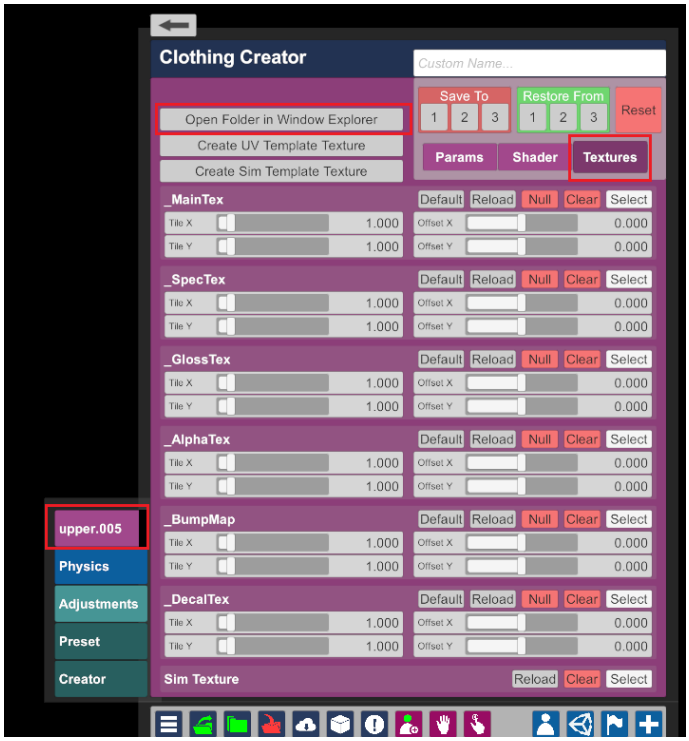
Your item might be uncolored, that's fine, we will assign the materials within VaM.
Save out the Scene. File-Save As-Scene. The default location in “Documents\DAZ 3D\Studio\My Library\Scenes” is fine.



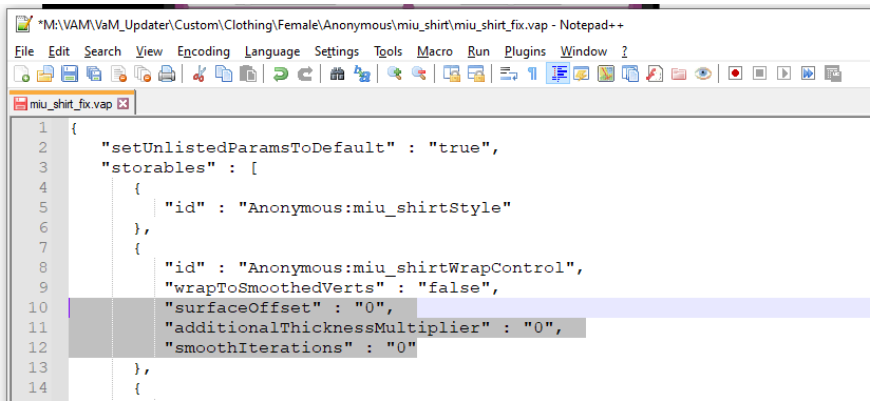
Now we go import into VaM. Homestretch!

Importing Scene to VaM

Open VaM. In the edit mode of your Person, go to the Clothing tab. Check off the Clothing Creator then Customize. Uncheck Combine Materials. Select Duf file, find your saved DAZ Scene, then import. Your model will look odd once fully imported. This is due to Smooth Iterations automatically added to your clothing. We can remove this manually by editing a Preset.
Save a Preset within the Preset tab. Name can be anything. Find your preset file, easiest way is to go into the pink material tab, then Textures tab, Open Folder in Window Explorer.



Open the preset VAP file. Naming scheme is “clothingName_presetName.vap”. I will be using Notepad++ to edit, you can use Notepad or any other equivalent.
Set the surfaceOffset, additionalThicknessMultiplier and smoothIterations to 0. Save the file.



Back into VaM. Load the same preset you saved within the Preset tab. Still looks a bit off? We need to add physics. The most basic and simple way to have a little bit of physics on the item is to set a Uniform Sim Texture to the whole clothing. You can learn more on your own about VaM's physics and how to adjust specific items on the mesh, but for this guide, we will use the Uniform Sim Texture.
Back to the Creator tab. Click Generate Sim Data. Then click Set Uniform Sim Texture. Click Sim Enabled. Adjust the slider of the Uniform Value to something that looks and sims good for your clothing. Below is an example of an un-simmed clothing and one that is simmed slightly. You can adjust even further within the Physics tab. There's a lot of options within there.

Time to texture! Under the pink textures tab, enter each material and assign to the item. PNGs are okay to use, I've had issues with TGA files. Under the textures tab, select the _MainTex and find your image. If your clothing is now all shiny, it's because of the Specular influence within VaM. You can adjust based on the type of clothing. I.e rubber will have specular and be glossy, others that do not reflect will not have much or any specular reflections.

When your item looks and feels good, you can now save it within VaM. Back to the Creator tab. Bottom left, Create New Item. You can also set a thumbnail for the item too.

Congrats! The item is now in VaM! If you run into any issues, the Blender and VaM community have a plethora of answers. I started with no guidance to begin with and it took me months to figure out a good workflow that outputs decent ported items. Thanks again to all those who help out the 3DCG babies.

This concludes the basic MMD Clothing to VaM tutorial. Go forth and enjoy!

(sorry, i will not be releasing this look)