



Quickstart Guide

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Welcome

Welcome to Motorica MoGen, the ultimate tool for creating seamless locomotion in games, cinematics, VFX, and the Metaverse! Say goodbye to tedious animation work, and hello to effortless motion generation. With MoGen, you can easily configure preset root motion, mix styles, and hit "GENERATE" to bring your hero characters, NPCs, or crowds to life. Our team at Motorica is dedicated to developing cutting-edge technologies for advanced character animation, using generative deep learning to push the boundaries of what's possible. This guide will walk you through our pipeline for stand-alone usage, but be sure to check out our guides for Blender and Autodesk Maya for other pipelines. Get ready to start creating amazing motion with MoGen - happy generating!

- the Motorica team

MoGen web – overview

The image shows a screenshot of the MoGen web interface. The main area displays a 3D character in a running pose on a grid floor. The interface includes a top navigation bar with a user profile and a settings gear. A right-hand sidebar contains controls for generating and managing animations, including a 'Generate Animation' button, a seed input field, a 'Loop' checkbox, and a 'Style Library' with various character options. A bottom control bar features a play/pause button, a scrubbing bar, a playback speed selector, and icons for looping, camera movement, and character selection. Annotations with arrows point to these elements, explaining their functions.

visualization options
(does not affect generation)

Dropdown menu to logout or report issues

Generate new animation

Randomize
(new seed + generate)

Seed history

Switch between Motion and Styles panels

generation settings

play / pause

scrubbing bar

loop playback speed


run-in-place

move camera to follow character

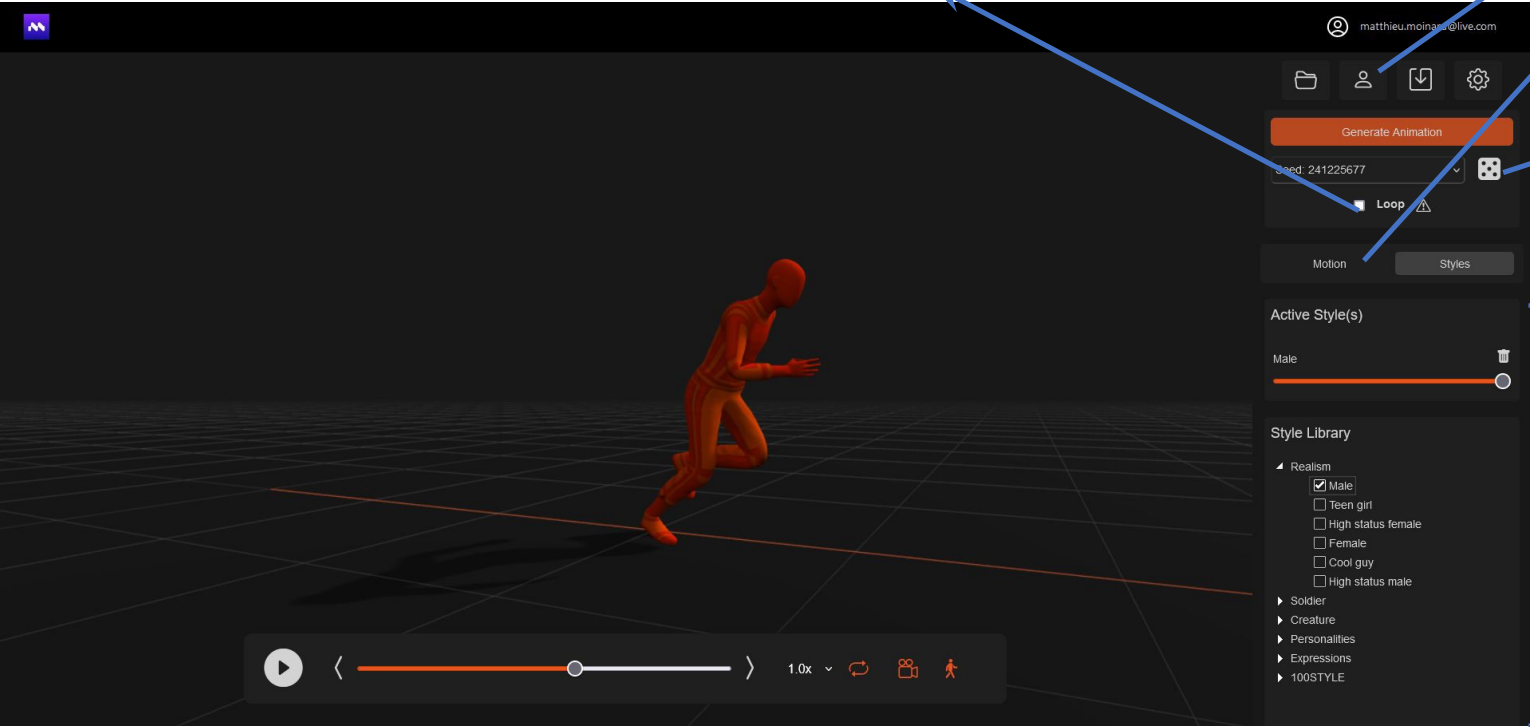
How to synthesize

#1 - Define motion
Option 1 Upload FBX file and import root motion
Option 2 User motion presets

#3 - Choose loopable
Select to generate a loopable animation

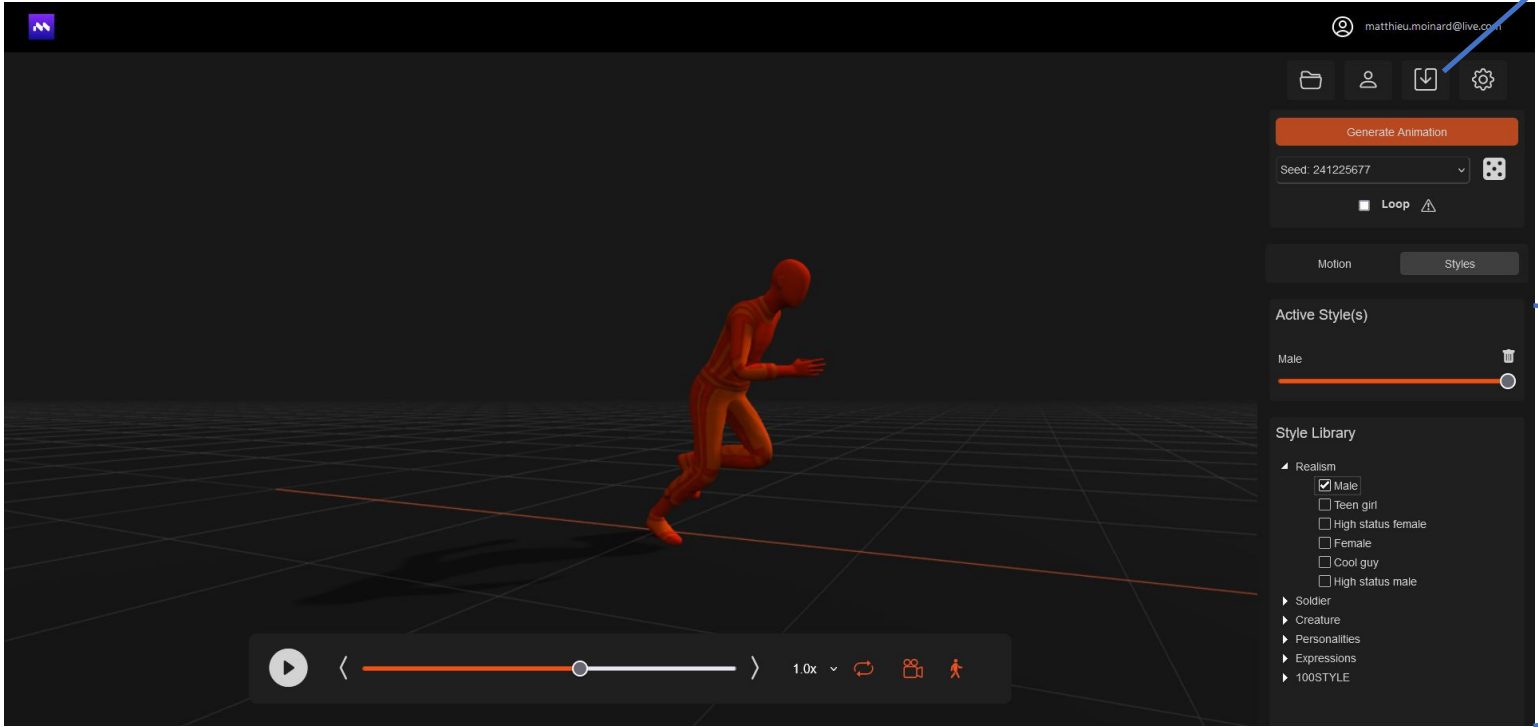
#4 - Generate
Click to generate animation
Hit  to change seed and generate another variant of the motion. Use seed history to go back to previous ones.

#2 - Enter style(s)
Choose one or combine two styles

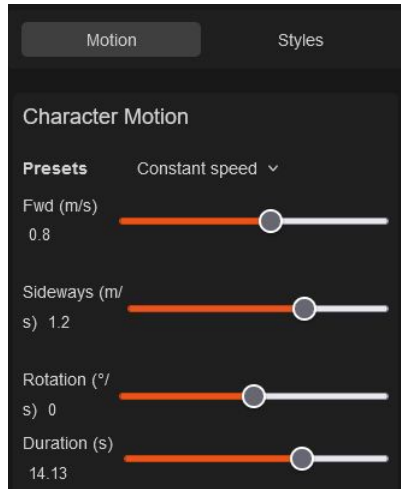


Downloading

Click the download-icon to download a fbx-file with the synthesized animation.

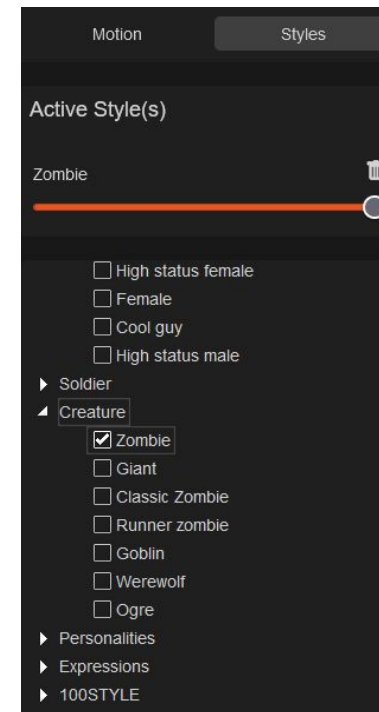



Example: How to generate a zombie animation



1. Set the presets to "constant speed" in the Motion panel and mix between fwd and side motion (Zombies usually walk more sideways than straight ahead due to leg injuries). Choose the desired duration of the generated animation.

2. Deselect any previous style and select only the "Creatures->Zombie" style. Make sure the style mixer is set to 100% ZOMBIE, and hit the "Generate Animation" button.



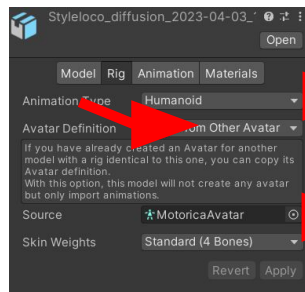
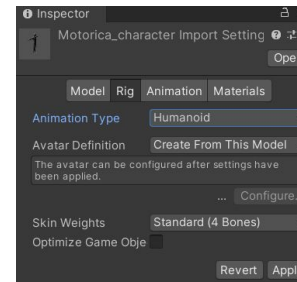
3. Optionally re-generate a new animation or tweak the root motion in step 1. Use the seed history to go back to old versions. Download the animation by clicking 



Importing and retargeting in Unity

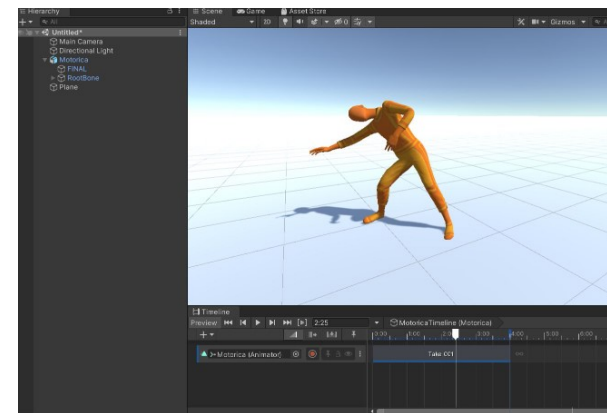
To facilitate importing and retargeting in Unity, we first set up an Avatar Definition for the Motorica character. This only needs to be done once, and the Avatar Definition can then be re-used for all animations you create.

1. Download the default Motorica character and import to Unity.
2. In the import settings, choose Rig and set the Animation Type to Humanoid. This will create a MotoricaAvatar to your asset.



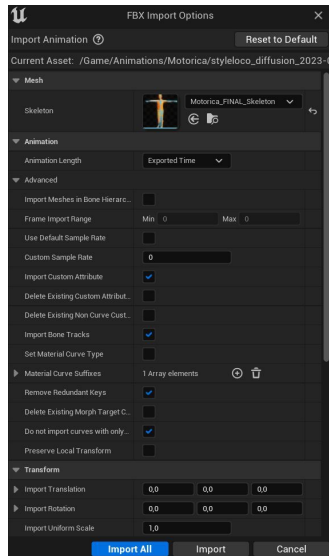
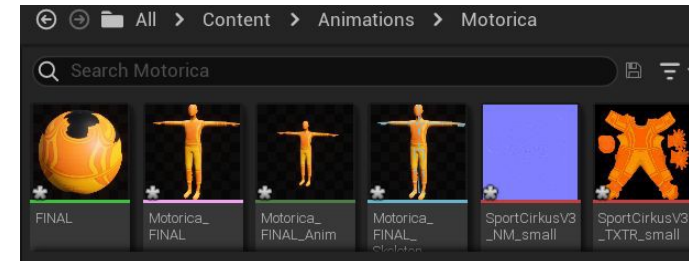
3. Import you generated animations as Humanoid, but set Avatar Definition to "Copy From Other Avatar" and select the MotoricaAvatar.

4. The animations can now be applied to any Humanoid character.



Importing and retargeting in Unreal

1. Download the default Motorica character and import to Unreal. This will create the following assets to your folder.



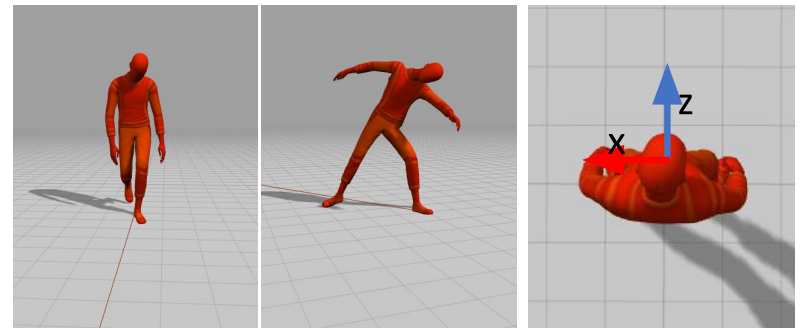
2. Import you generated animations use the skeleton from 1) as template.

3. Doubleclick the animation for a preview. Please refer to the Unreal documentation for retargeting and further use.



Tips-and-tricks

- Avoid style mixing in the beginning as it is hard to see what happens. Explore one style at a time until you are familiar with how they look.
- Some styles have limited running capabilities, which is somewhat tied to the style. It is for example very unusual in real life to see people running while texting, or old people sprinting in athlete pace. Use the controls wisely and do not expect too much of strange combinations.
- Some root motion speeds can be equally valid for a slow jog as for a fast walk. Hitting randomize several times may give you the motion you want.
- Some styles, e.g. Zombie, look better walking more sideways than straight ahead. This will generate limping as for a leg injury. Motorica uses the orientation of the hips to define what is forward. Experimenting with the local rotation may generate interesting variations.





Thank you!

Please join our [Discord](#) server and take part in the development of generative AI animation!

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