User manual for animation tools in Norah

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Chapter 1: Overview of the animation tools in Norah

The Norah website is a one-stop-shop for all your animation needs. With the range of animation tools in Norah, you can apply a multitude of animation effects to your 3D models and make them come to life. Norah offers the animation tools for registered users. The following tools are available:

- **Auto Rigger**: This tool uses deep learning to automatically create a skeleton for your 3D model, without any manual efforts, in a few seconds. A rigged 3D model can be used to create a wide variety of animations with movements and actions.
- **Animation Repository**: This tool is powered by machine learning algorithms and provides a huge library of locomotion, detailed and complex dance forms, and combat animations that cater to a multitude of requirements.
- **Style Transfer tool**: This AI-powered tool provides you the capability to combine aesthetics of two different animations to produce stunning and unexpected results.
- **Motion Editor**: This tool enables you to animate each body part of the 3D model and customize the animation to suit your needs.

This document provides instructions for you to use these Norah-powered tools.

Chapter 2: Signing in to the Norah website

To sign in to the Norah website, you have the following options:

- Create a new Norah account
- Sign-in by using the social networking options – Google, Facebook, or Twitter.

To create a new Norah account

Perform the following steps:

1. Visit the Norah website http://norah.ai/.
2. Click **Sign-in**.
3. At the bottom of the popup window, click **Sign-up**.
4. In the window that appears, enter your email ID and enter a password you want to use.
5. Click **Create account**.
   You can now sign in by using your Norah credentials.

To Sign-in by using the social networking options

Perform the following steps:

1. Visit the Norah website http://norah.ai/.
2. Click **Sign-in**.
3. On the window that appears, select a social networking account option.
4. Follow the on-screen instructions to sign in by using your social networking credentials.

Chapter 3: Rigging your 3D animations by using Auto-Rigger

Rigging a 3D model creates a skeleton or a frame for that model. By rigging a 3D model you can make it move around and perform different actions. Otherwise, the model would be static and remain in the position that it was when the animator created it. Rigging 3D models manually is a technically complex and time-consuming process. With Norah's Auto Rigger feature, you can rig your 3D models in just a few seconds. You can use the rigged 3D model to apply any animation to it.

This topic provides the method of using the Auto Rigger to automatically rig 3D models.

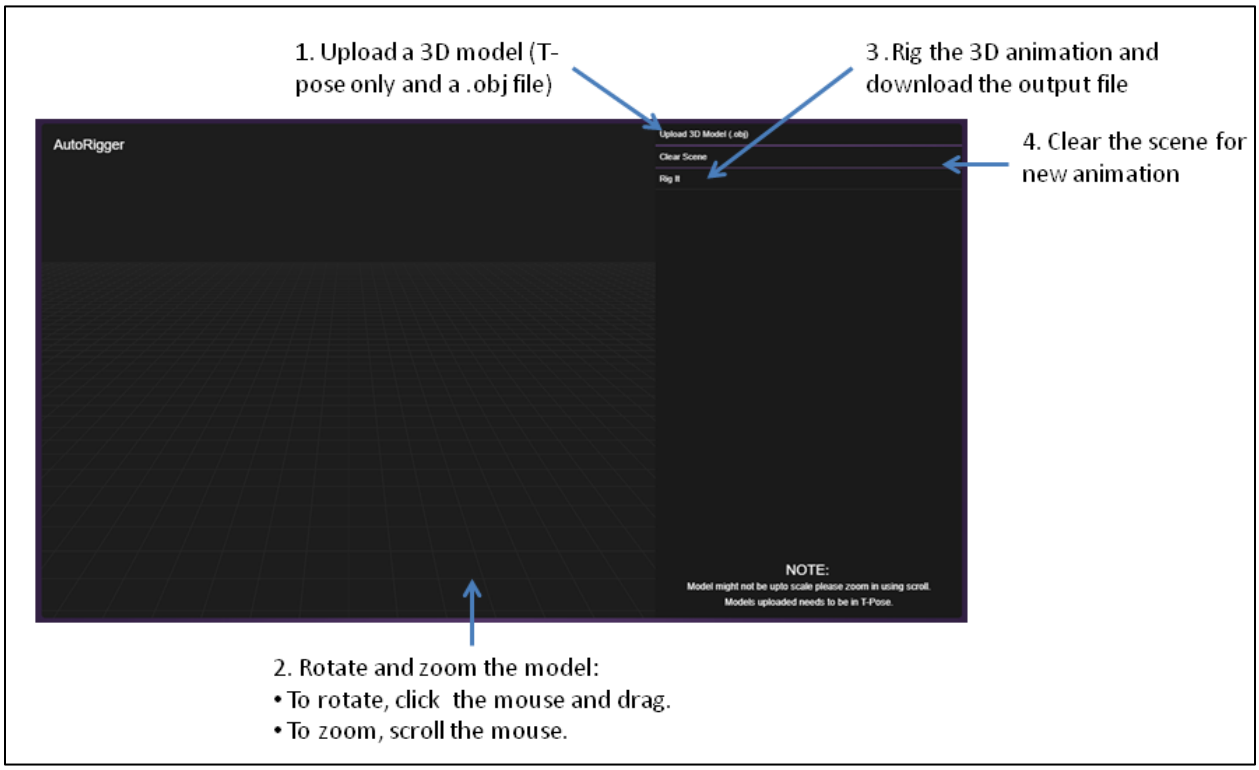
Important:
To use Auto Rigger, the 3D model must be in the T-pose and the animation file must be in a **.obj** file format.

Before you begin

- Ensure that you have the 3D model as a **.obj** file on your computer.
- Ensure that the 3D model is in a T-pose.

Quick start graphic for Auto Rigger

The following graphic summarizes the steps to use the Auto Rigger:



To rig 3D models

Perform the following steps:

1. Sign in to the Norah website at http://norah.ai/.
2. Navigate to **Home** > **Animation** > **Auto Rigger**.
3. To upload a source 3D animation file, follow the steps:
    a. Click **Upload 3D Model (.obj)**.
    b. Navigate to the location where you stored the .obj file and click **Open** to upload it.
4. To zoom in and out of the 3D model, scroll the mouse on the scene area.
5. To rotate the model in all directions, click and drag the mouse on the scene area.
6. To rig the 3D model, click **Rig it**.
   The output file is automatically downloaded to your computer.

Chapter 4: Using animations from the Animation Repository

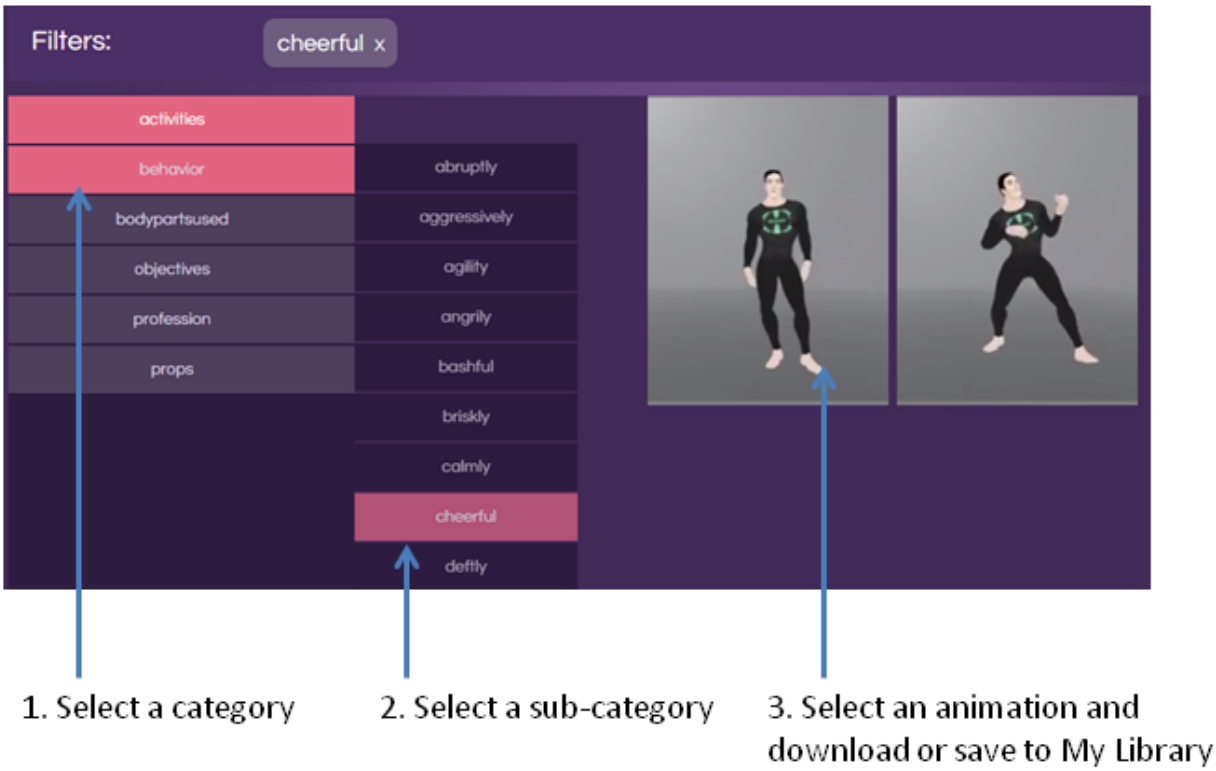
Norah's Animation Repository is a collection of several animations that are ready for your use. The animations are labeled and grouped in different categories such as activities, profession, body parts, and so on. With the Animation Repository, you have the following options:

- Download an animation as a .anim file and apply it to any rigged 3D model.
- Save several animations to **My library** on the Norah website and customize them further before downloading the final 3D animation.

Notes:
• To access the **My library** option, you must log in to the Norah website.
• There is no limit on the number of animations you can add to **My Library**.

Quick start graphic for Animation Repository

The following graphic summarizes the steps to use the Animation Repository:



To use an animation from the Animation Repository

Perform the following steps:

1. Sign in to the Norah website at http://norah.ai/.
2. Navigate to **Home** > **Animation** > **Repository**.
   The repository displays all the available animations. By default, the **activities** category is selected.
3. Navigate and select different categories and sub-categories to narrow down the search results. For example, if you select **behavior** > **cheerful**, a filter is applied to the search result and only those animations from the specific category and sub-category are displayed.

   Note:
   If there are no animations that have all the applied filters, the search returns an empty result.
4. Hover on the animation you want to use to download or add the animation to your library:
   - Click the icon to add the animation to your Norah library.
   - Click the icon to download the animation as a **.anim** file to your computer.

Chapter 5: Mixing two animation style by using Style Transfer

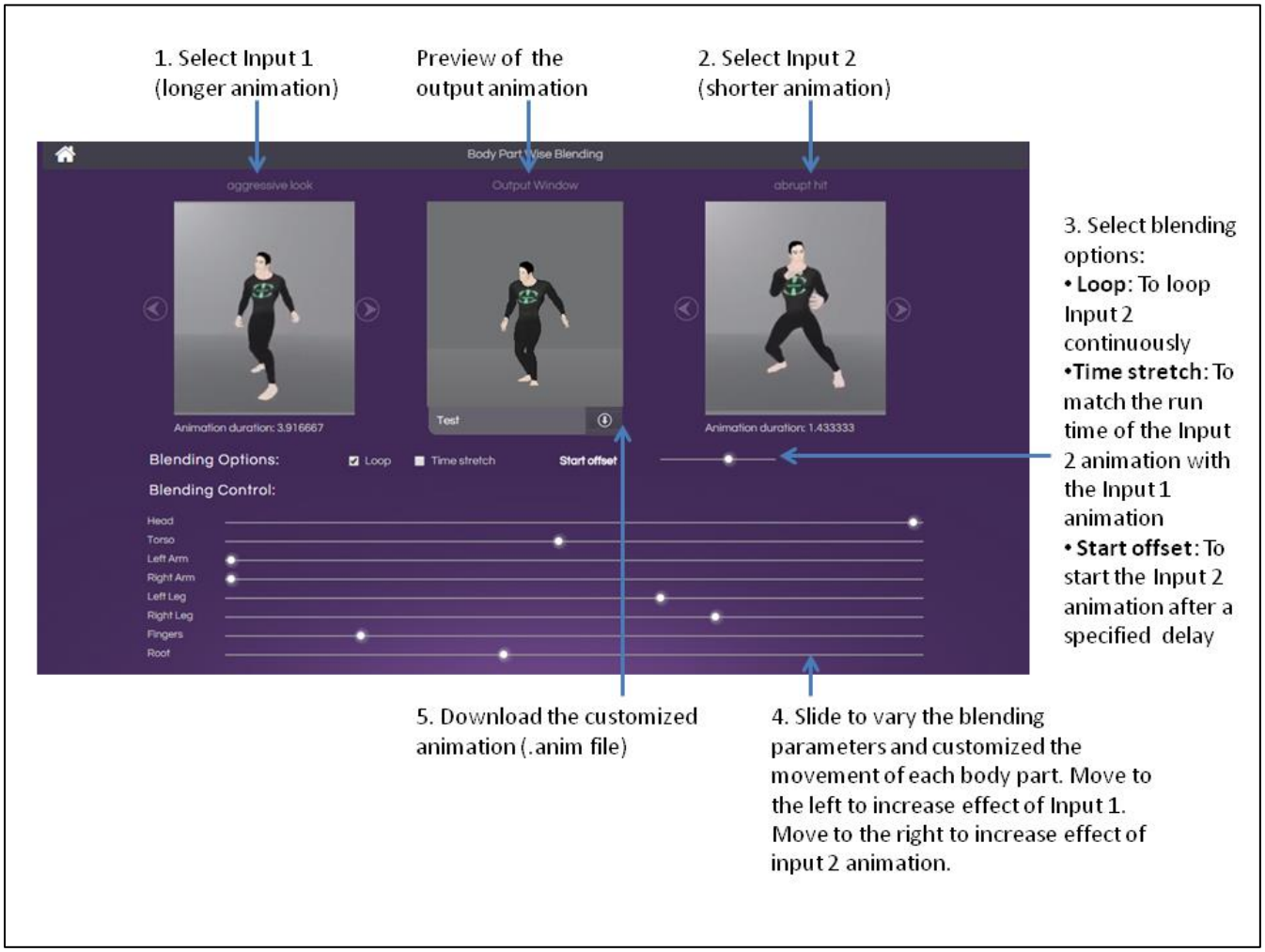
The Style Transfer tool lets you mix the styles of two animations and create a third animation with blended motion effects. With this tool, you can use two animations from your library and apply further customization to fine-tune the movements of each body part of the 3D model. You can also choose to loop the animation or apply a time-stretch effect. After you apply all customizations, you can download the animation file that is saved in a **.anim** file format.

Note:
To use this tool, you must have at least two animations from the Animation Repository added to **My Library**.

Before you begin

Ensure that at least two animations are available in **My Library**.

Quick start graphic for Style Transfer



To mix two animation styles by using Style Transfer

Perform the following steps:

1. Sign in to the Norah website at http://norah.ai/.
2. Navigate to **Home** > **Animation** > **Style Transfer**.
   Two animations from **My Library** are displayed in the **Input 1** and **Input 2** areas.

   Note:
   Out of the two default animations that are displayed in the input 1 and Input 2 areas, the longer animation is always displayed in the Input 1 area and the shorter animation is displayed in the Input 2 area.

3. To change the animations, navigate using the and icons for each animation and select the animation you want.
   The **Output Window** automatically displays the blended animation.

   Note:
   When you select a particular animation in the Input 1 area, only those animations that are of a shorter duration than Input 1 are available for selection in the Input 2 area.

4. To apply specific actions on the animation, select a **Blending Option**:

Use a Blending Option…	To perform the following actions…
Loop	• Select to run the Input 2 animation in a loop until the Input 1 animation ends. • Deselect to run the Input 2 animation only once, while the Input 1 animation continues to run until the end.
Time Stretch	• Select to match the run time of the Input 2 animation with the Input 1 animation, making Input 2 animation a slow-motion animation.
Start offset	Move the slider to start the Input 2 animation after a delay, as displayed near the slider bar.

5. To vary the blending parameters and customize the movement of each part of the 3D model, slide the different **Blending Controls** towards the left or the right side.
   The position of each slider determines the percentage of the effect of Input 1 and Input 2 that is applied to the output animation.
   - To increase the effect of **Input 1** animation, move the slider to the left side.
   - To increase the effect of **Input 2** animation, move the slider to the right side.

   Example:
   If the **Head** slider is on the extreme left, 100% effect of Input 1 is applied. If the slider is on the extreme right, 100% effect of Input 2 is applied. If the slider is in the center, 50% effect of Input 1 and 50% effect of Input 2 is applied to the output.

6. To save the custom output animation and download the **.anim** file to your computer, click the icon in the **Output Window**.

Chapter 6: Customizing animations by using Motion Editor

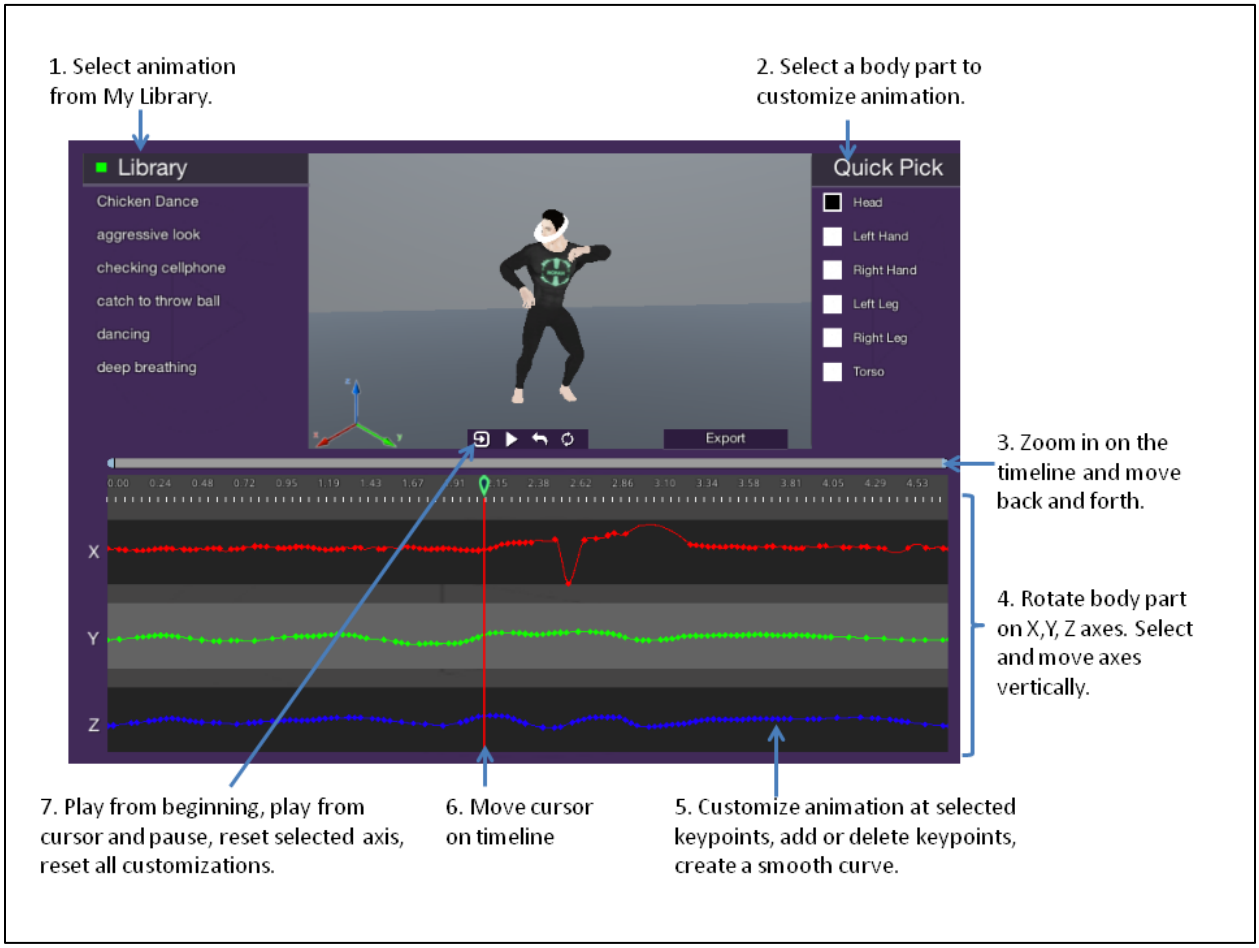
With the Motion Editor, you can apply fine-tune the animations available in My Library to suit your requirements. With this tool, you can control the movement of each body part of the 3D model across the X, Y, and Z axes, for specific points on the timeline through which the animation runs.

Note:
To use this tool, add an animation you want to customize from the Animation Repository to **My Library**.

Before you begin

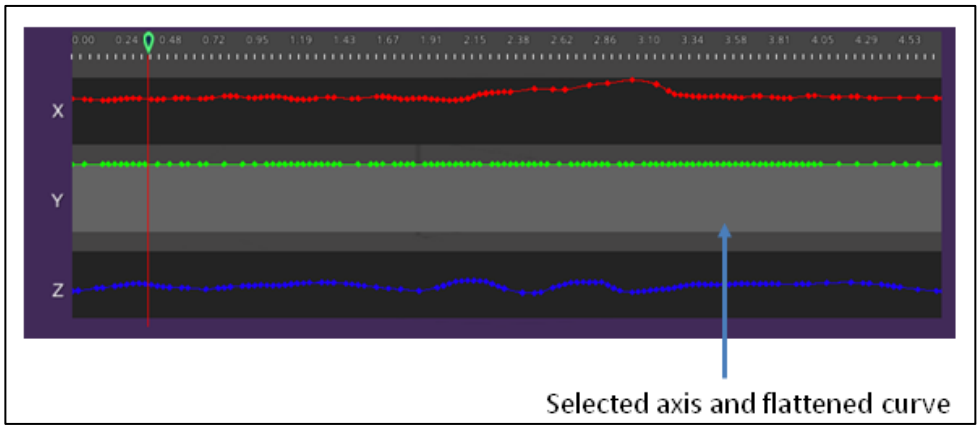
Ensure that at least one animation is available in **My Library**.

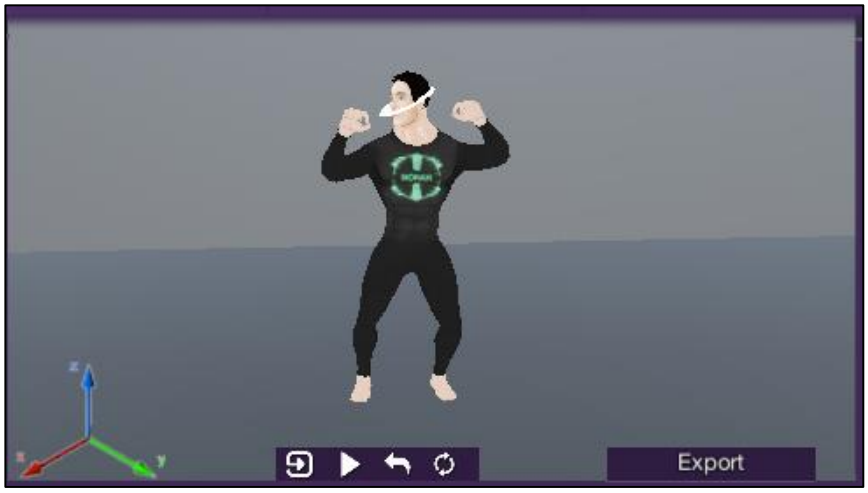
Quick start graphic for Motion Editor

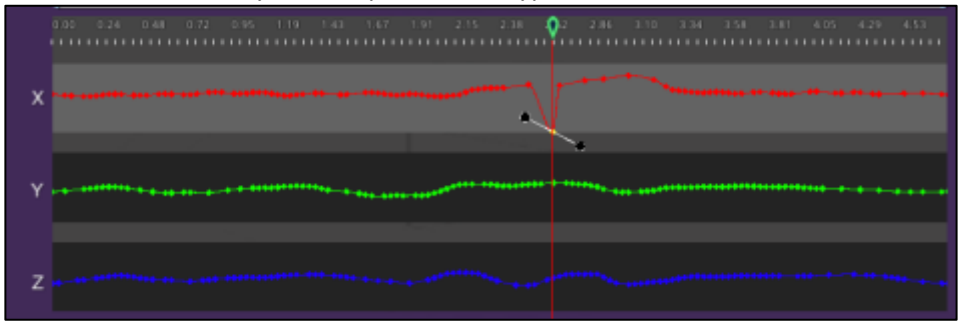


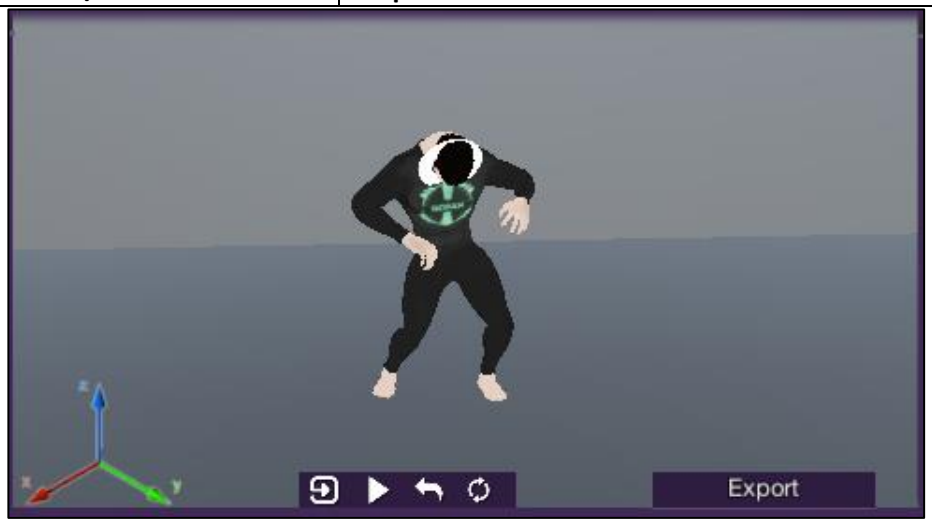
To apply custom animations to 3D model

1. Sign in to the Norah website at http://norah.ai/.
2. Navigate to **Home** > **Animation** > **Motion Editor**.
3. From the **Library** list on the left, select an animation to customize.
4. From the **Quick Pick** list on the right, select a body part to animate.
5. Customize the animation by using the following controls:

<table>
<tr><th>Control</th><th>Action/s</th><th>Steps</th></tr>
<tr><td rowspan="2">X, Y, Z axes</td><td>Rotate the selected body part in a particular direction on a particular axis.
Note: The body parts remain in that position throughout the animation unless you customize the position for specific keypoints.</td><td>1. Click anywhere inside the axis area, except on the key points.
The axis is highlighted.
2. Drag the axis vertically.
Note: Dragging the axis to the extreme top or bottom edge makes the animation curve completely flat.</td></tr>
<tr><td colspan="2">Example:
In the following image, the Y axis is selected and dragged to the extreme top edge. The curve is flattened.
 

As a result, the head of the 3D model turns towards the extreme left as shown in the following image:
 
</td></tr>
<tr><td>Keypoints</td><td>• Customize the animation of the</td><td>1. Select a specific keypoint on a timeline.
2. Drag and move it vertically between the top and</td></tr>
</table>

<table>
<tr><th>Control</th><th>Action/s</th><th>Steps</th></tr>
<tr><td></td><td>selected body part at specific keypoints on the timeline.
• Add new keypoint.
• Delete a keypoint.
• Create a smooth curve by rotating the tangent line on the keypoint.
• Select multiple keypoints.</td><td>bottom edges of the timeline or horizontally between adjacent keypoints on the same timeline.
3. To add a new keypoint to a particular axis, right click on that axis at the position you want to create the new keypoint.
4. To delete a keypoint from a particular axis, point at that keypoint and click the center mouse button.
5. To create a smooth curve when you move a keypoint, rotate the tangent line by holding down its either end and dragging it in clockwise or anticlockwise direction.
Note: The tangent rotates approximately 180° clockwise and 180° anti-clockwise.
6. To select multiple keypoints on a particular axis, click Shift + drag your mouse on the axis.
Note: Currently you cannot perform any action on the multiple keypoints selected at a time.</td></tr>
<tr><td></td><td colspan="2">Example:
In the following image, one keypoint on the X-axis is dragged to the bottom edge. The cursor is currently on that particular keypoint on the timeline.
 
As a result, the head of the 3D model is rotated downwards on the X-axis as shown in the following image:</td></tr>
</table>

Control	Action/s	Steps
		
Cursor bar on the timeline	• Lock the cursor bar for moving on the timeline. • Unlock the cursor bar.	1. To lock the cursor bar and move it smoothly across the timeline, click the cursor bar head once. The color changes from green to orange and you can move the cursor by moving the mouse. 2. To unlock the cursor, click the cursor head once again. The color changes to green and you can move the cursor by clicking and dragging the mouse. **Note**: The animation in the preview window reflects the settings at the current cursor position.
Timeline	• Zoom in and out on the timeline. • Move back and forth on the timeline.	1. To zoom in and out on the timeline, click either end of the horizontal gray bar above the timeline , and stretch or compress it. 2. To move back and forth on the timeline, click on the center of the horizontal gray bar above the timeline , and drag it sideways.
Play, pause and reset controls	• Play animation from the beginning. • Play animation from current cursor position. • Stop or pause playing the animation. • Reset selected axis to default settings. • Reset all customizations to the default animation.	1. To play the animation from the beginning, click the icon. 2. To play the animation from the current cursor position, click the icon. 3. To pause playing the animation, click the icon. 4. To reset the selected axis to its default settings, click the icon. 5. To reset all customizations to the default animation, click the icon.

6. To export your customized animation in **.anim** file format, click **Export**.
7. Save the **.anim** file to your computer.