

CV VTuber Example 1.1.3



iOS & Android & Windows10 UWP support

Win & Mac & Linux Standalone support

WebGL support

ChromeOS support

visionOS support(beta)

Support for preview in the Editor

System Requirements

Build Win Standalone & Preview Editor : Windows8 or later

Build Mac Standalone & Preview Editor : macOS 10.13 or later

Build Linux Standalone & Preview Editor : Ubuntu18.04 or later

Build Android : API level 21 or later

Build iOS : iOS Version 12.0 or later

Build VisionOS : visionOS 1 or later (beta)

The execution of this asset is required "[OpenCV for Unity](#)" and "[Dlib FaceLandmark Detector](#)".

Features:

- CVVTuberExample(Computer Vision Virtual YouTuber Example) is an example project of controlling 3D humanoid model (Mecanim Humanoid, ["Unity-chan!" Model](#), [VRM](#))

[Model](#), [Live2DCubism5 Model](#)) using WebCamTexture or video file. You can control the head orientation and the facial expression of the 3D humanoid model using a camera or video frame.

- The head orientation and face expression are controlled by the following procedure.
 1. **WebCamTextureMatSourceGetter** - Convert WebCamTexture to OpenCV's Mat class.
 2. **VideoCaptureMatSourceGetter** - Convert video frames loaded with VideoCapture to OpenCV's Mat class.
 3. **MultiSourceMatSourceGetter** - Converts frames from various sources to OpenCV's Mat class using MultiSource2MatHelper.
 4. **DlibFaceLandmarkGetter** - Detect a face landmark points from OpenCV's Mat class.
 5. **DlibHeadRotationGetter** - Estimate head orientation from face landmark points.
 6. **HeadRotationController** - Control the head orientation of the 3D model using the estimated head orientation.
 7. **HeadLookAtIKController** - Set Animator.SetLookAtPosition() method using the estimated head orientation.
 8. **DlibFaceBlendShapeController** - Control the face BlendShape of the 3D model using the face landmark point.

Basic Examples:

- VideoCapture CV VTuber Example
- WebCamTexture CV VTuber Example

Advanced Examples: (require add-ons setup)

- UnityChan CV VTuber Example
- VRM10 CV VTuber Example
- Live2DCubism5 CV VTuber Example
- VRM CV VTuber Example (Deprecated)

[Official Site](#) | [ExampleCode](#) | [Android Demo](#) [WebGL Demo](#)

Version changes:

1.1.3 [Common]Updated for OpenCV for Unity v3.0.0.(This asset requires OpenCVforUnity 3.0.0 or later.) [Common]Updated for Dlib FaceLandmark Detector v2.0.0.(This asset requires Dlib FaceLandmark Detector v2.0.0 or later.)

1.1.2 [Common]Updated for OpenCV for Unity v2.6.4.(This asset requires OpenCVforUnity 2.6.4 or later.) [Common]Updated for Dlib FaceLandmark Detector v1.4.1.(This asset requires Dlib FaceLandmark Detector v1.4.1 or later.)

1.1.1 [Common]Added VRM10CVVTuberExample. (Compatible with VRM1.0. Depends on VRM-0.124.2_dd50.unitypackage or later.)

1.1.0 [Common]Changed the minimum supported version to Unity2021.3.35f1. [Common]Separated the examples using the Built-in Render Pipeline and Scriptable Render Pipeline. (Except UnityChanCVVTuberExample and VRMCVVTuberExample.) [Common]Updated for UniVRM-0.124.1_e606.unitypackage. Added

RuntimeVRMMetaLoader functionality. [Common]Updated for CubismSdkForUnity-5-r.2.unitypackage.

1.0.9 [Common]Updated for OpenCV for Unity v2.5.9. (This asset requires OpenCVforUnity 2.5.9 or later.) [Common]Updated for Dlib FaceLandmark Detector v1.3.8. (This asset requires Dlib FaceLandmark Detector v1.3.8 or later.)

1.0.8 [Common]Updated for OpenCV for Unity v2.5.0. (This asset requires OpenCVforUnity 2.5.0 or later.) [Common]Updated for Dlib FaceLandmark Detector v1.3.4. (This asset requires Dlib FaceLandmark Detector v1.3.4 or later.) [Common]Updated for UniVRM-0.99.4_8d33. [Common]Updated for Cubism 4 SDK for Unity R5.

1.0.7 [Common]Updated support version to Unity-2019.4LTS. [Common]Updated for OpenCV for Unity v2.4.7. [Common]Updated for Dlib FaceLandmark Detector v1.3.3. [Common]Updated for UniVRM-0.95.1. [Common]Updated for Cubism SDK for Unity R4_1. [Common]Refactored the script.

1.0.6 [Common]Updated for OpenCV for Unity v2.4.2. [Common]Updated for Dlib FaceLandmark Detector v1.3.2. [Common]Removed Live2DCubism2CVVTuber Example and Live2DCubism3CVVTuber Example. [Common]Added Live2DCubism4CVVTuber Example. [Common]Refactored the script.

1.0.5 [Common]Updated for OpenCV for Unity v2.3.8.

1.0.4 [Common]Updated for OpenCV for Unity v2.3.4. [Common]Added Live2DCubism3CVVTuber Example.

1.0.3 [Common]Updated for Dlib FaceLandmark Detector v1.2.6. [Common]Refactored the script.

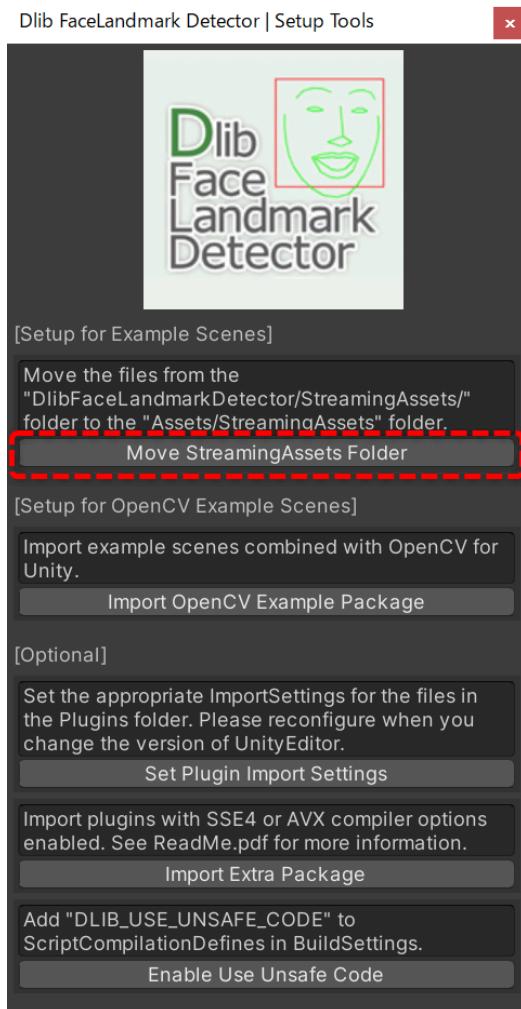
1.0.2 [Common]Updated for OpenCV for Unity v2.3.3. (This asset requires OpenCVforUnity 2.3.3 or later.) [Common]Updated for Dlib FaceLandmark Detector v1.2.5. (This asset requires Dlib FaceLandmark Detector 1.2.5 or later.)

1.0.1 [Common]largely changed the folder structure of asset package.(If there is a previous version of CVVTuberExample in the project, please delete the CVVTuberExample folder first and then import the new version.) [Common]Added WebCamTextureCVVTuberExample, VideoCaptureCVVTuberExample, UnityChanCVVTuberExample, VRMCVVTuberExample and Live2DCubism2CVVTuberExample.

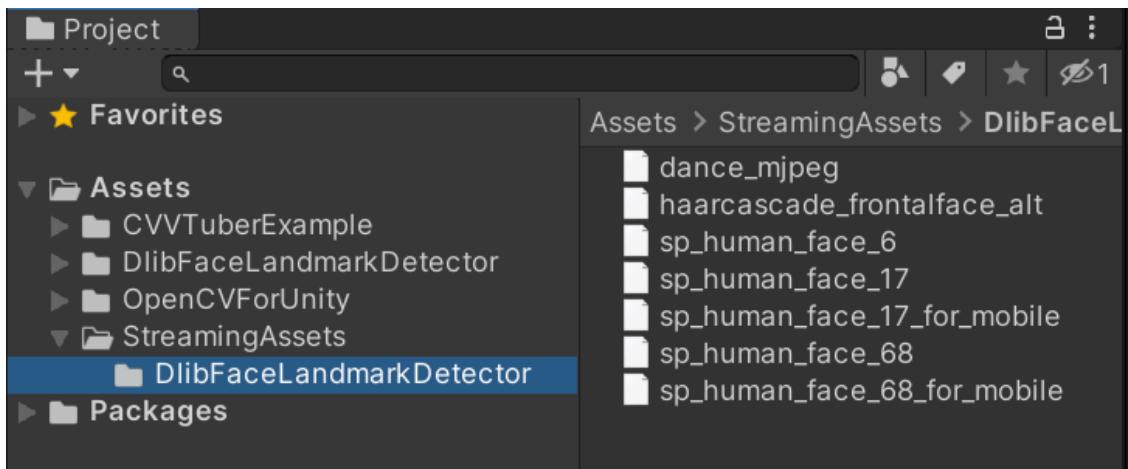
1.0.0 Initial version.

Quick setup procedure to run the Basic Example scenes:

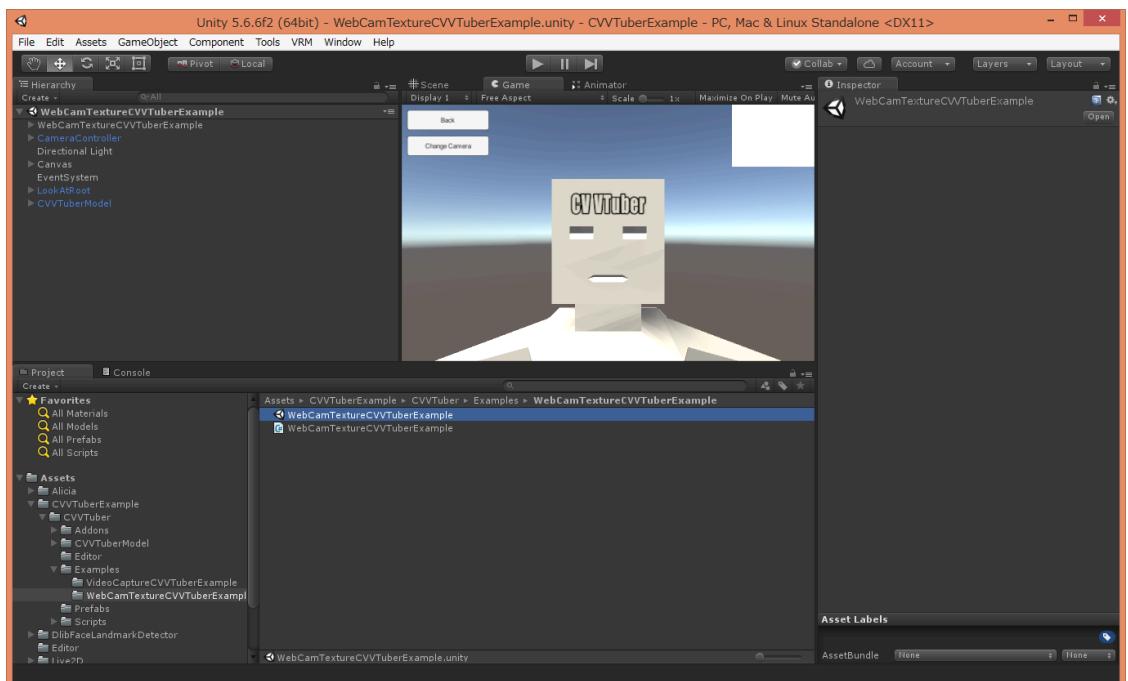
1. Import “[CVVTuberExample](#)”. (If there is a previous version of CVVTuberExample in the project, please delete the CVVTuberExample folder first and then import the new version.)
2. Import “[OpenCVForUnity](#)”.
3. Import “[Dlib FaceLandmark Detector](#)”.
4. Select MenuItem[Tools/Dlib FaceLandmark Detector/Open Setup Tools]. Click the [Move StreamingAssets Folder] button.



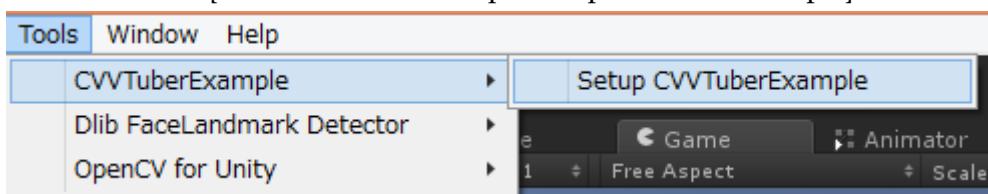
The following files are the only files required for this Example, so other files may be deleted.



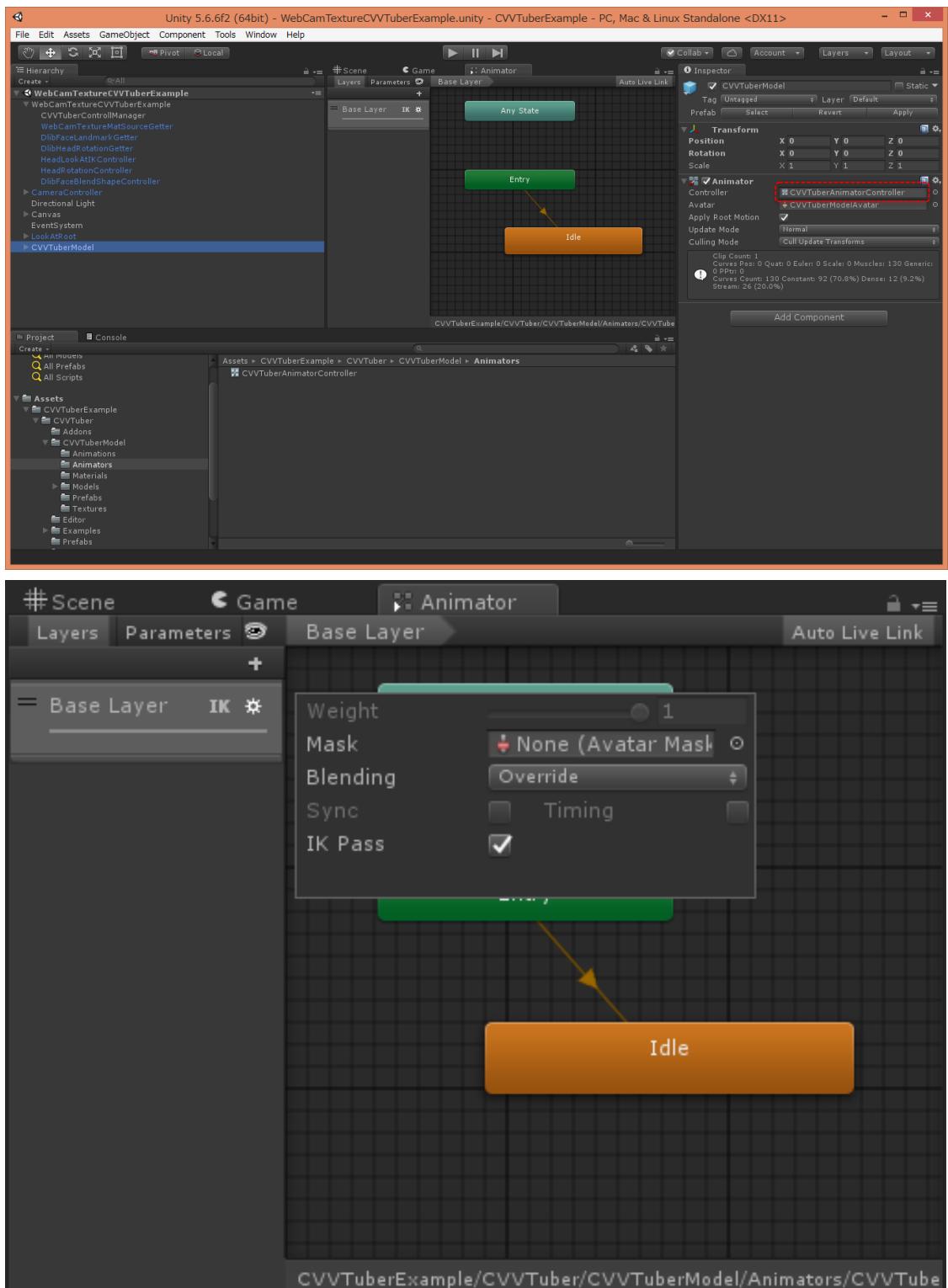
5. Open "Assets/CVVTuberExample/CVVTuber/Examples/MultiSourceCVVTuberExample" scene.



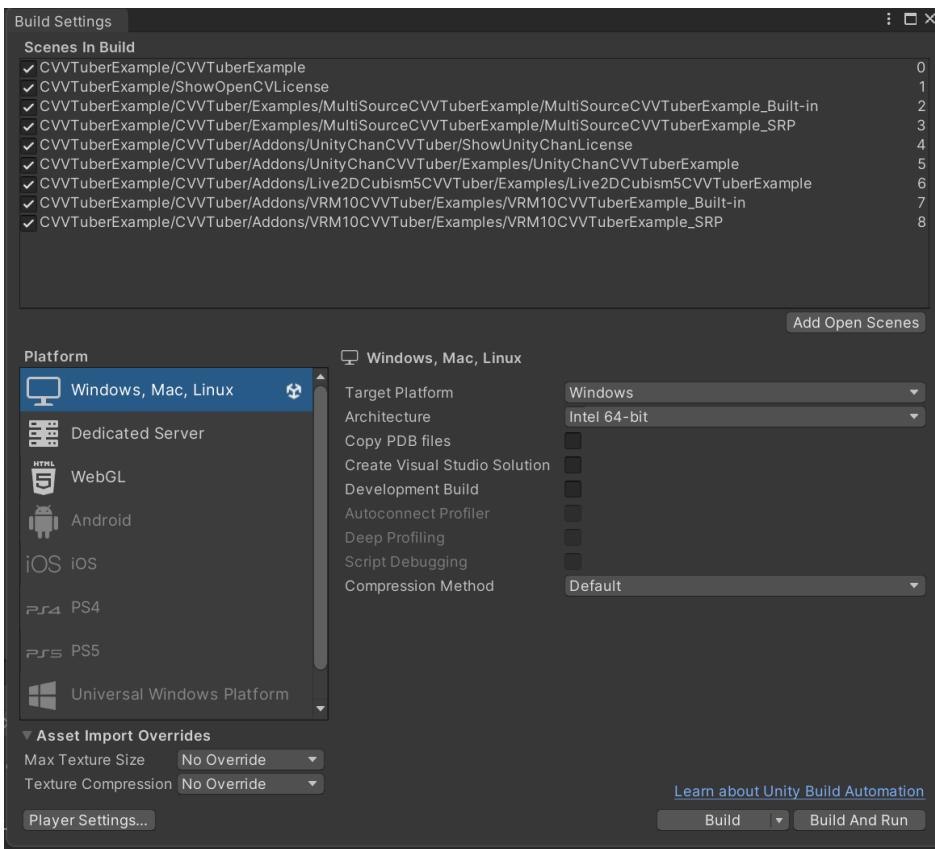
6. Select MenuItem[Tools/CVVTuberExample/Setup CVVTuberExample].



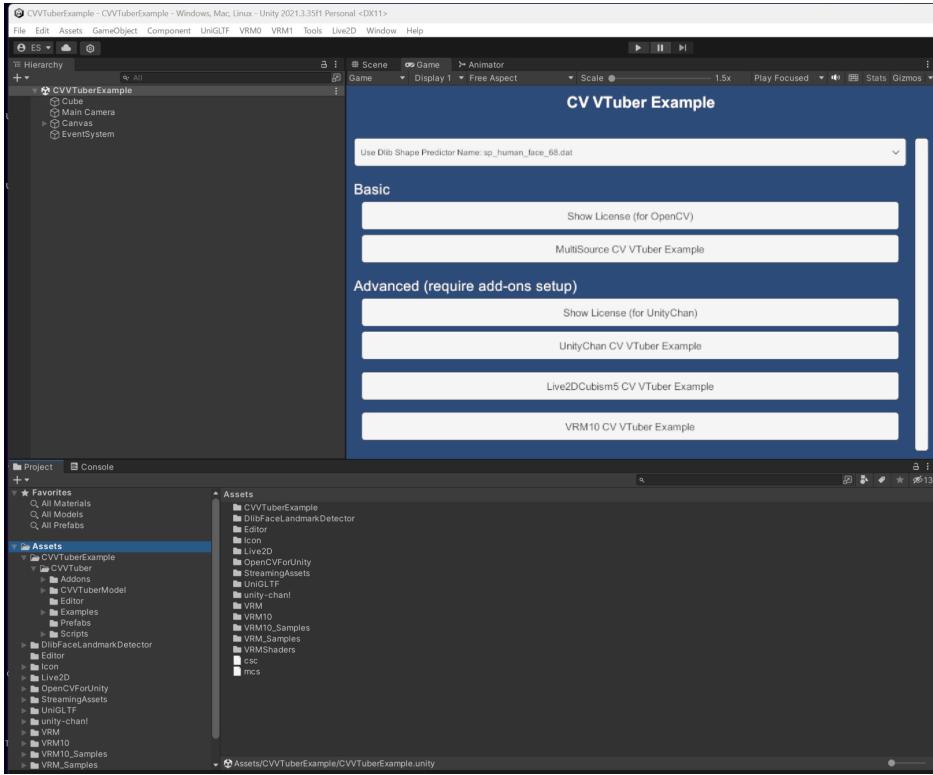
7. Click on CVVTuberAnimatorController to open the Animator window. Enable IK Pass flag of "Base Layer".



- Add all of the “***.unity” in the “CVVTuberExample/” folder to [Build Settings] – [Scene In Build].

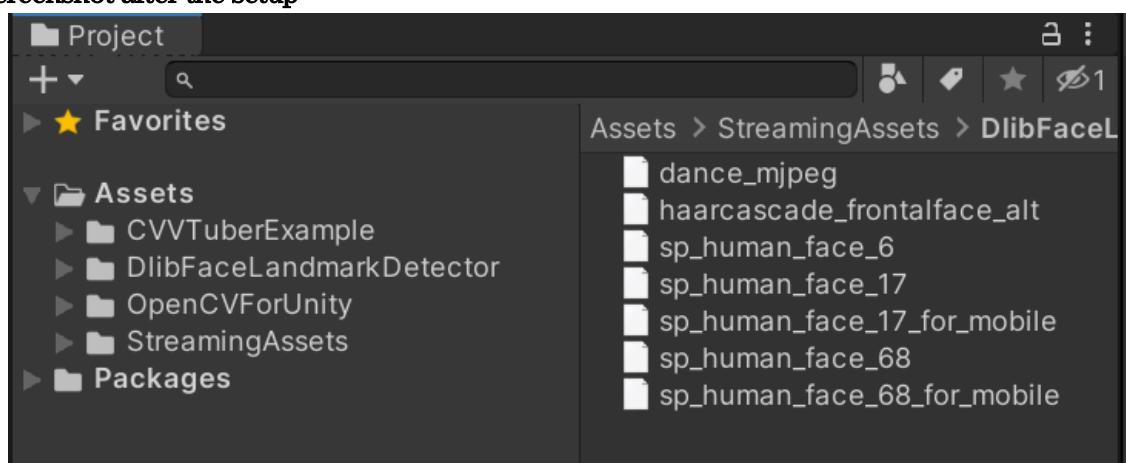


9. Run the CVVTuberExample scene.





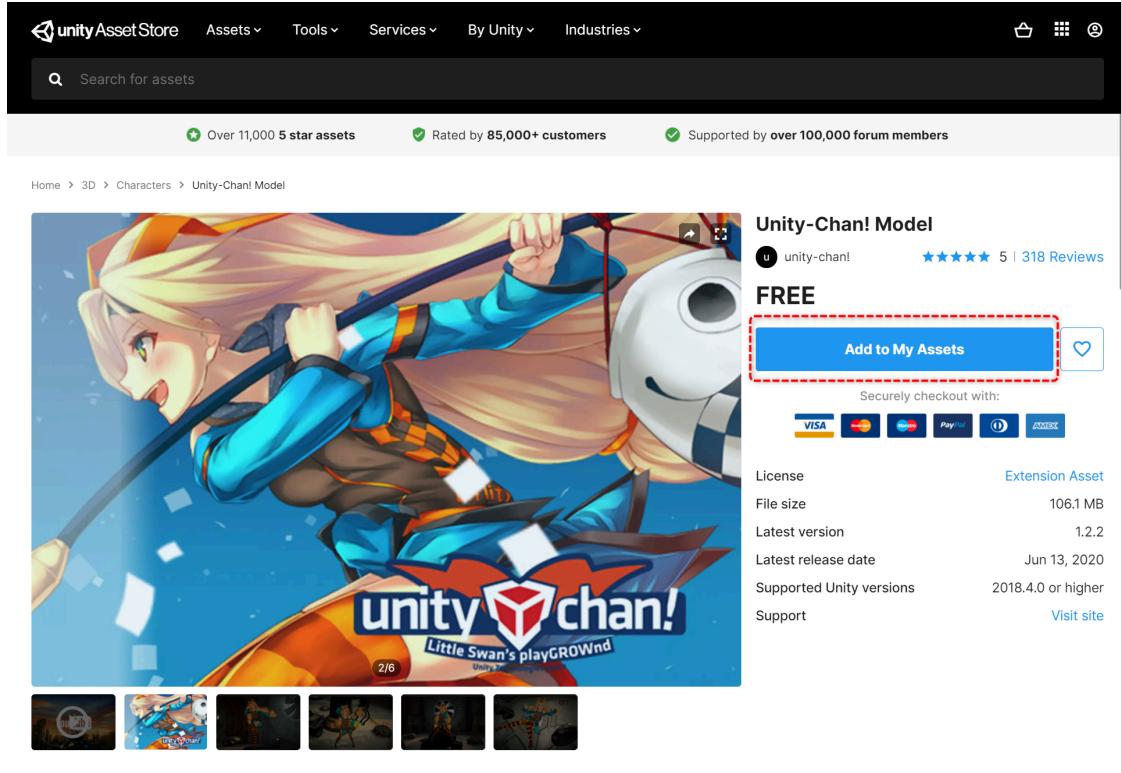
Screenshot after the setup



*In this example, a model set up with a general Mecanim Humanoid is also available.

Quick setup procedure to run the UnityChanCVVTuberExample scene:

1. Download “Unity-Chan! Model ver1.2.2” from [Unity's AssetStore](#).

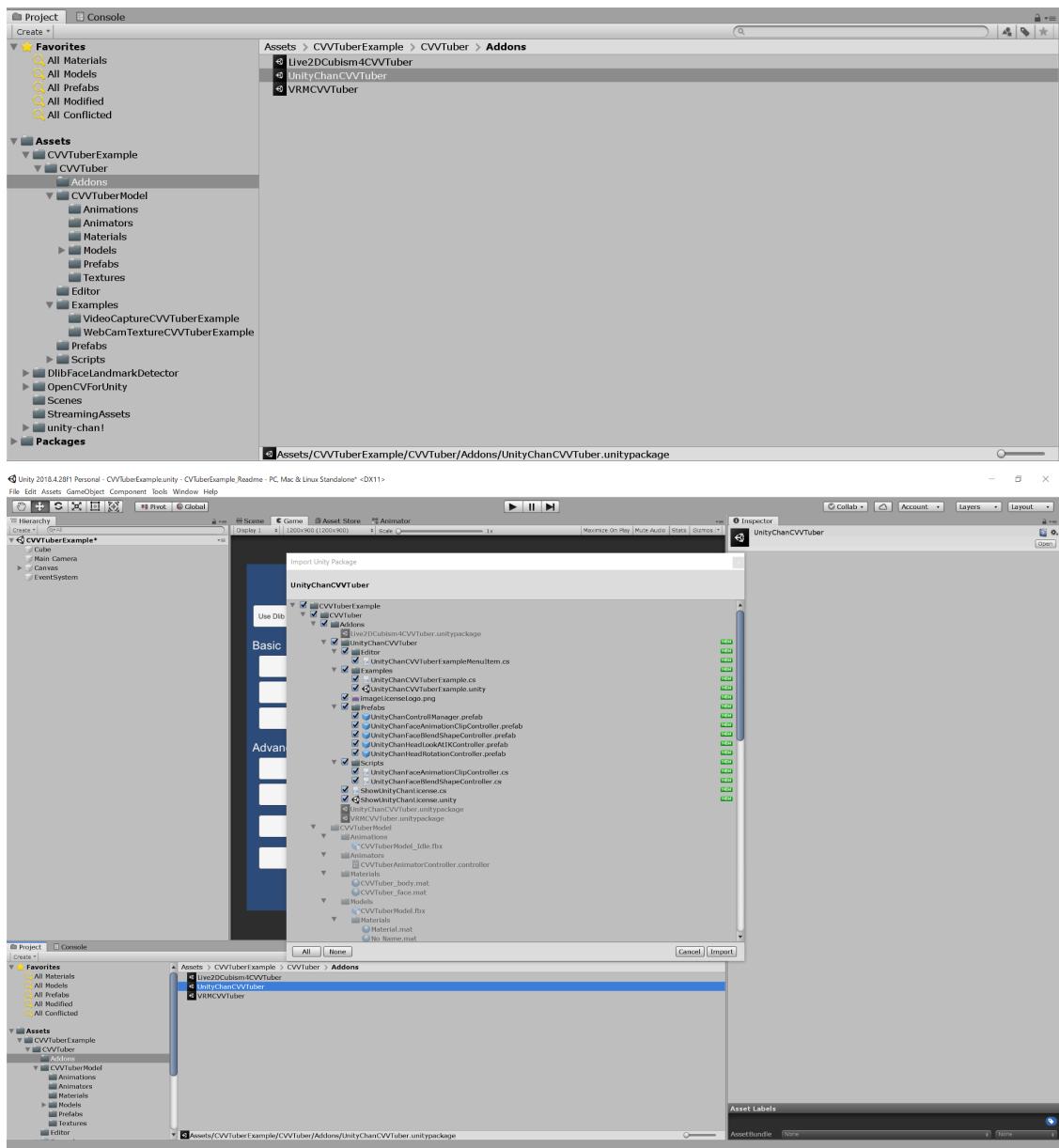


2. Import “Unity-Chan! Model”.

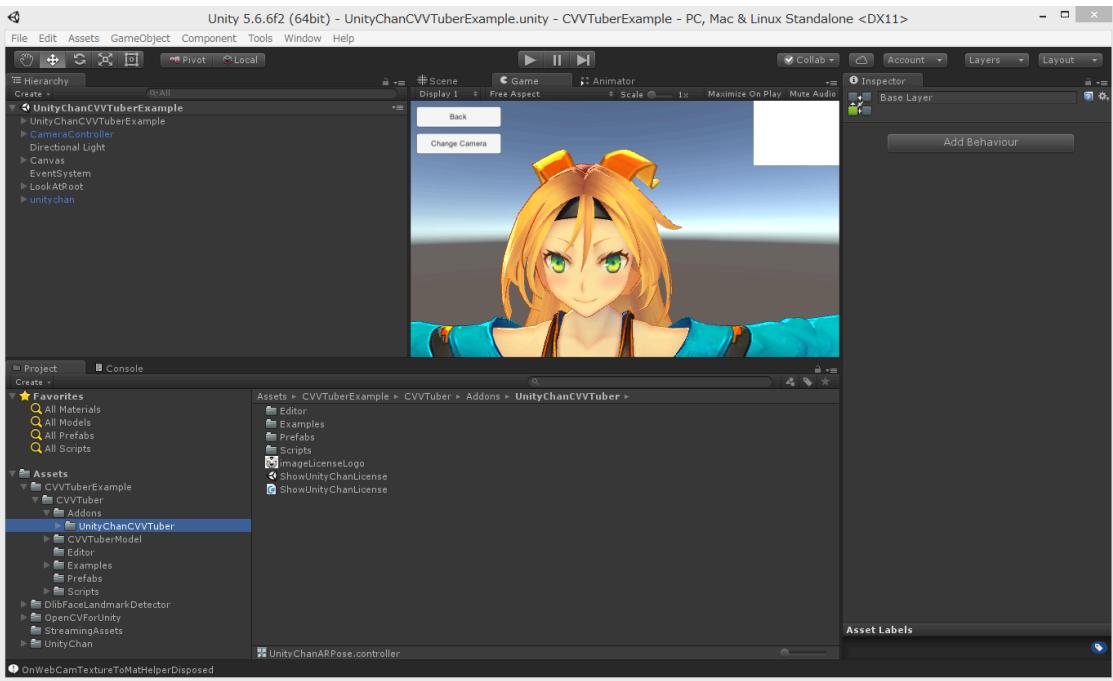


3. Import

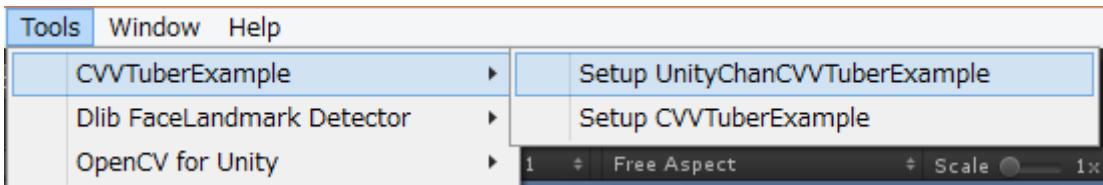
“Assets/CVVTuberExample/CVVTuber/Addons/UnityChanCVVTuber.unitypackage”.



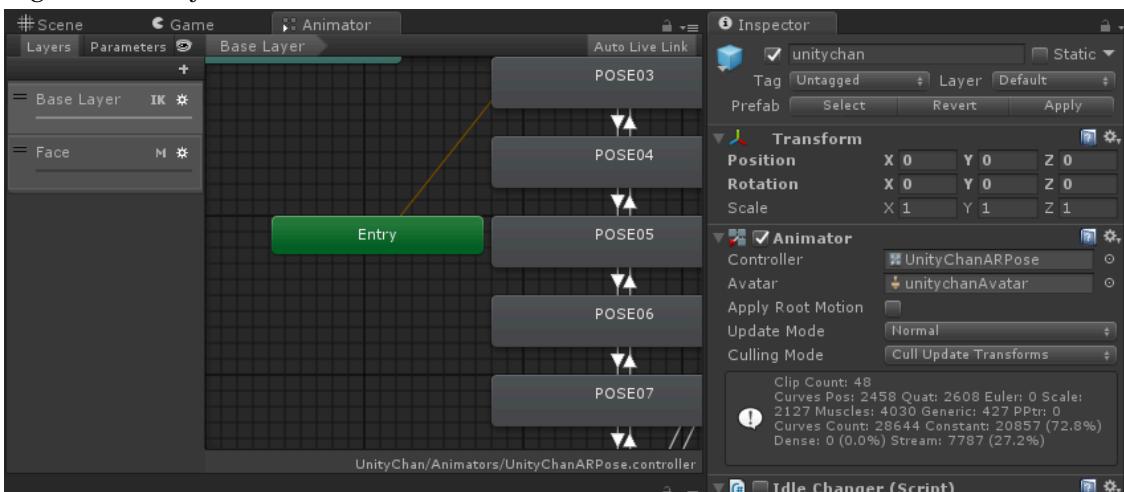
4. Open “Assets/CVVTuberExample/CVVTuber/Addons/UnityChanCVVTuber/Examples/UnityChanCVVTuberExample.unity” scene.

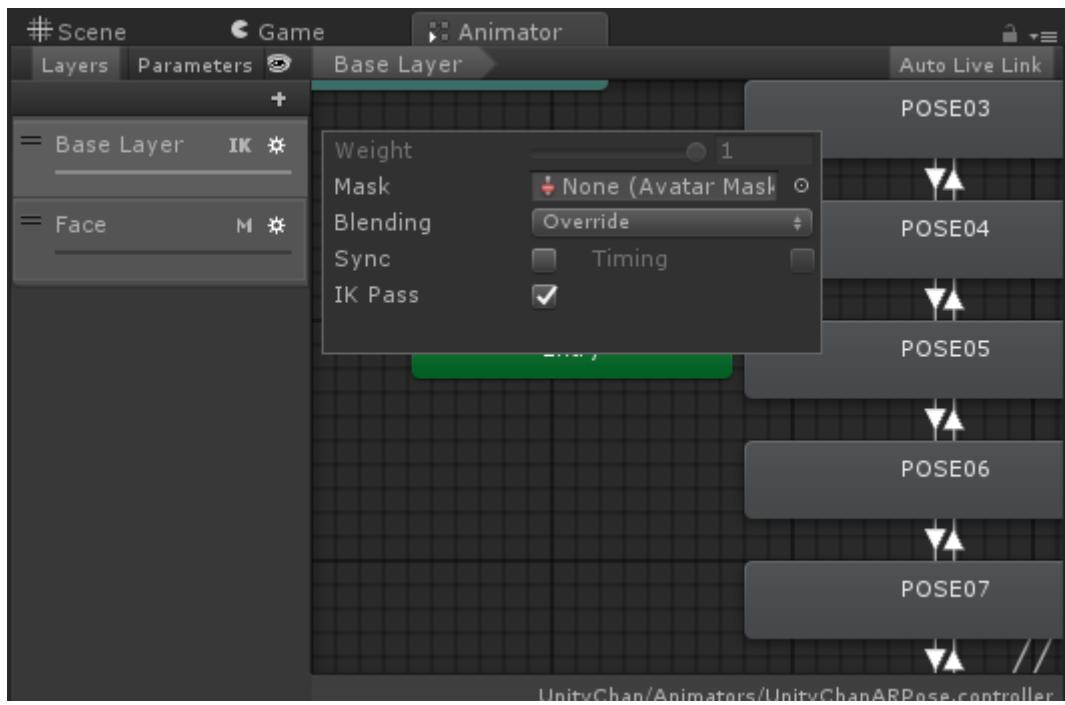


5. Select MenuItem[Tools/CVVTuberExample/ Setup UnityChanCVVTuberExample].



6. Click on CVVTuberAnimatorController to open the Animator window. Enable IK Pass flag of “Base Layer”.

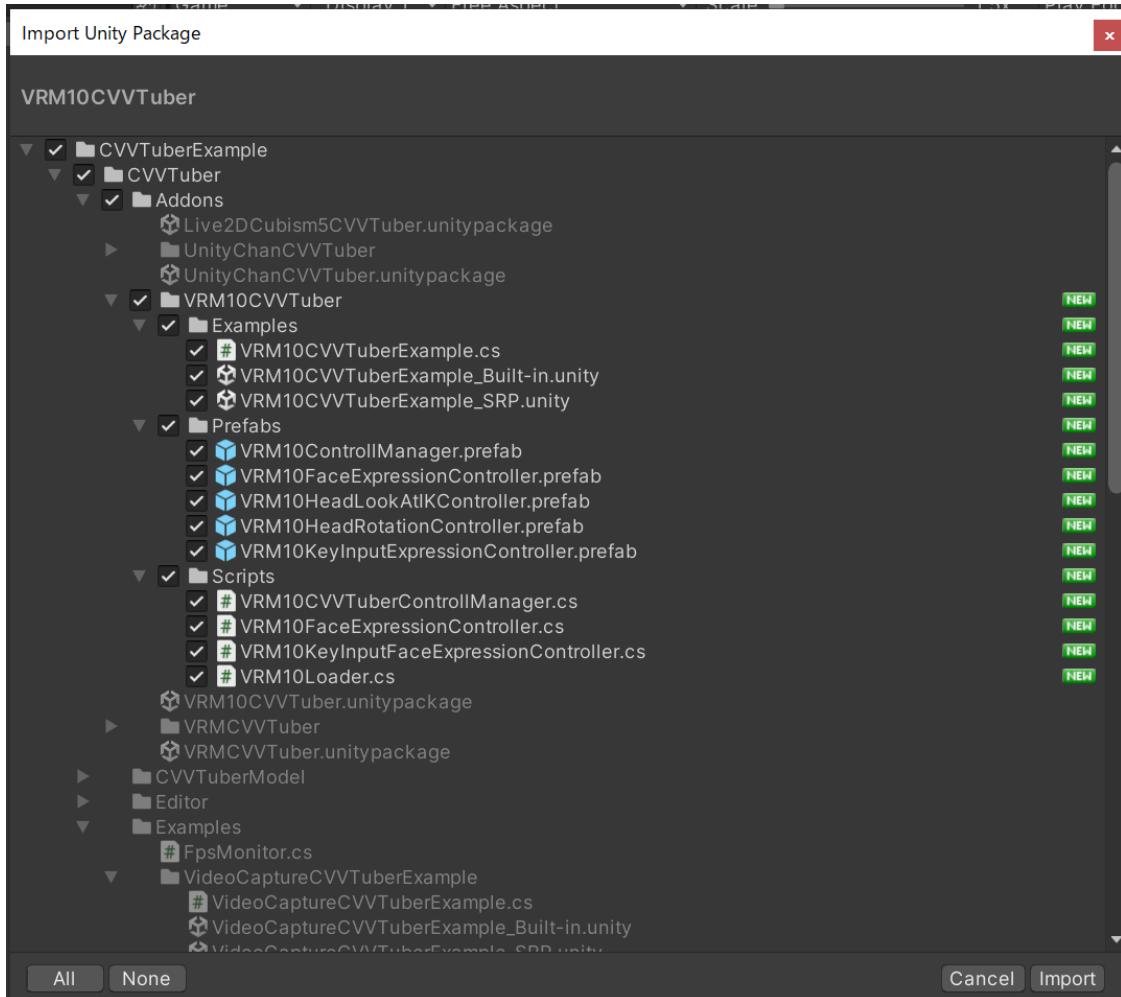




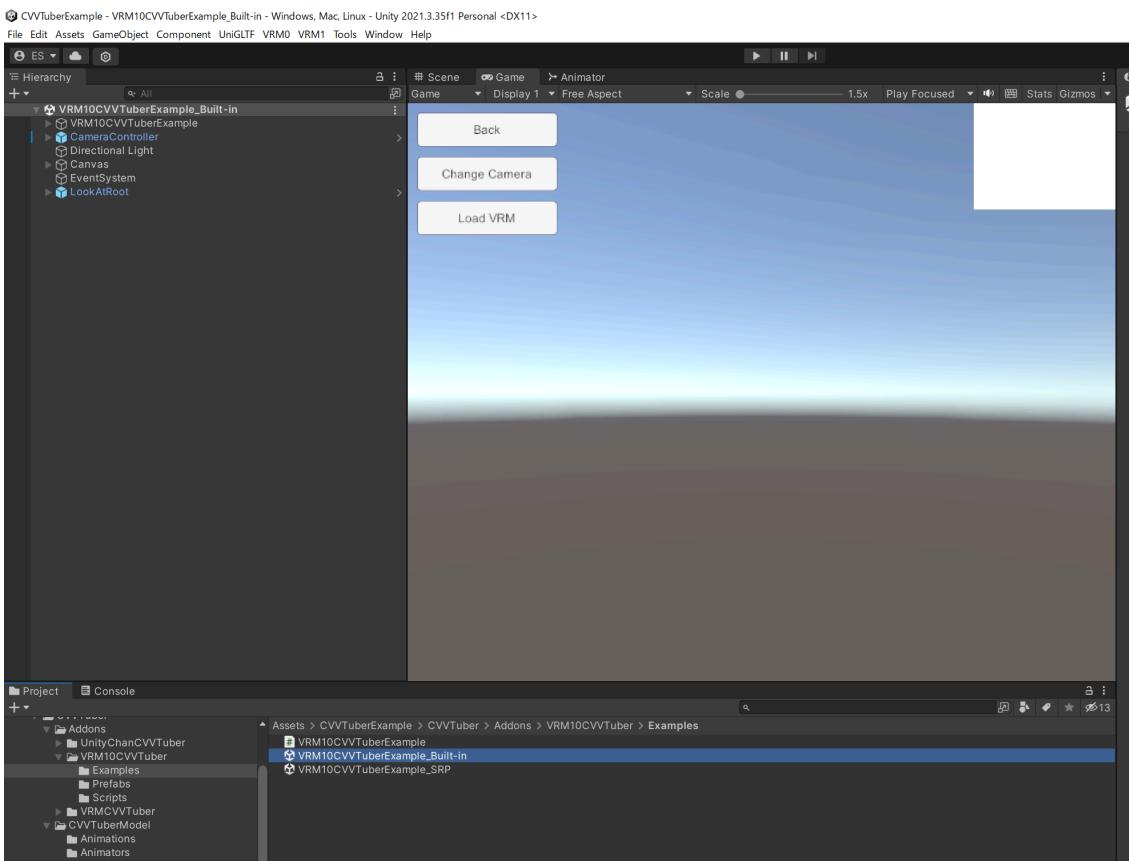
*In this example, a model set up with UnityChan format is also available.

Quick setup procedure to run the VRM10CVVTuberExample scene:

1. Download VRM-0.124.2_dd50.unitypackage from [GitHub vrm-c/UniVRM](#).
2. Import VRM-0.124.2_dd50.unitypackage.
3. Import “Assets/CVVTuberExample/CVVTuber/Addons/VRM10CVVTuber.unitypackage”.



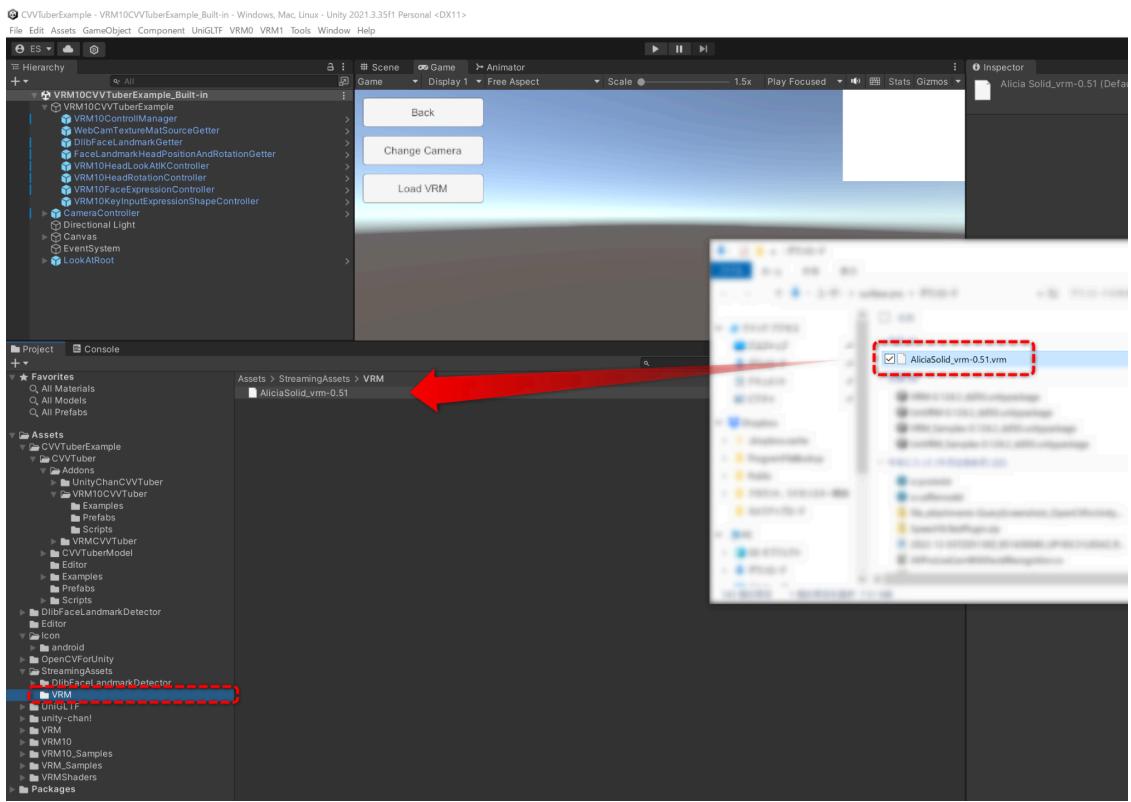
4. Open “Assets/CVVTuberExample/CVVTuber/Addons/VRM10CVVTuber/Examples/VRM10CVVTuberExample.unity” scene.



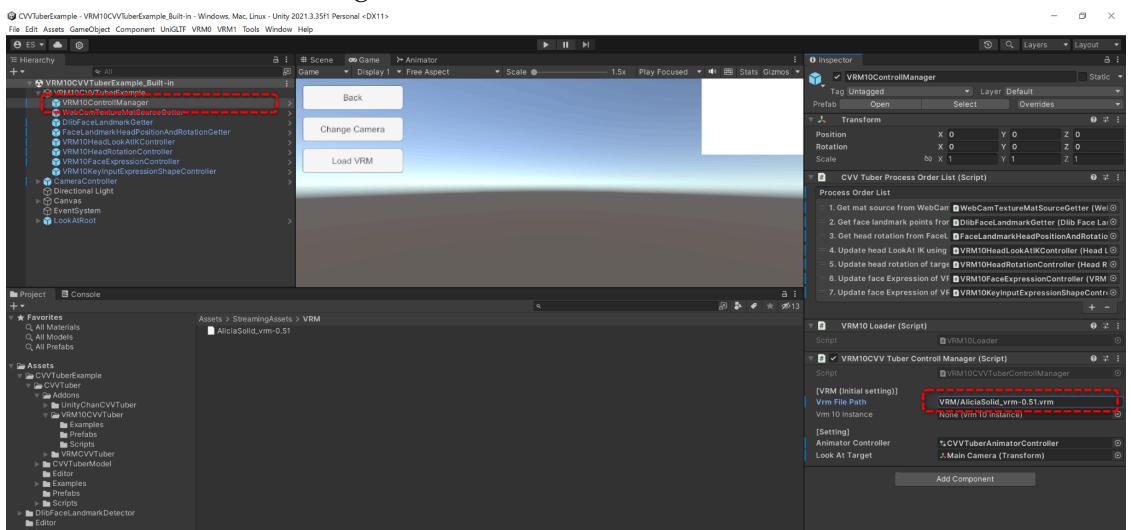
5. Download "AliciaSolid_vrm-0.51.vrm" from [GitHub vrm-c/UniVRM/Tests/Models/Alicia_vrm-0.51/](#).

The GitHub repository page for vrm-c/UniVRM. The repository has 72 stars and 149 forks. The 'Code' tab is selected. A commit by PoChang007 titled 'Update AliciaSolid to 0.51' is shown, dated 04 Sep 2019. The file 'AliciaSolid_vrm-0.51.vrm' is highlighted with a red dashed border.

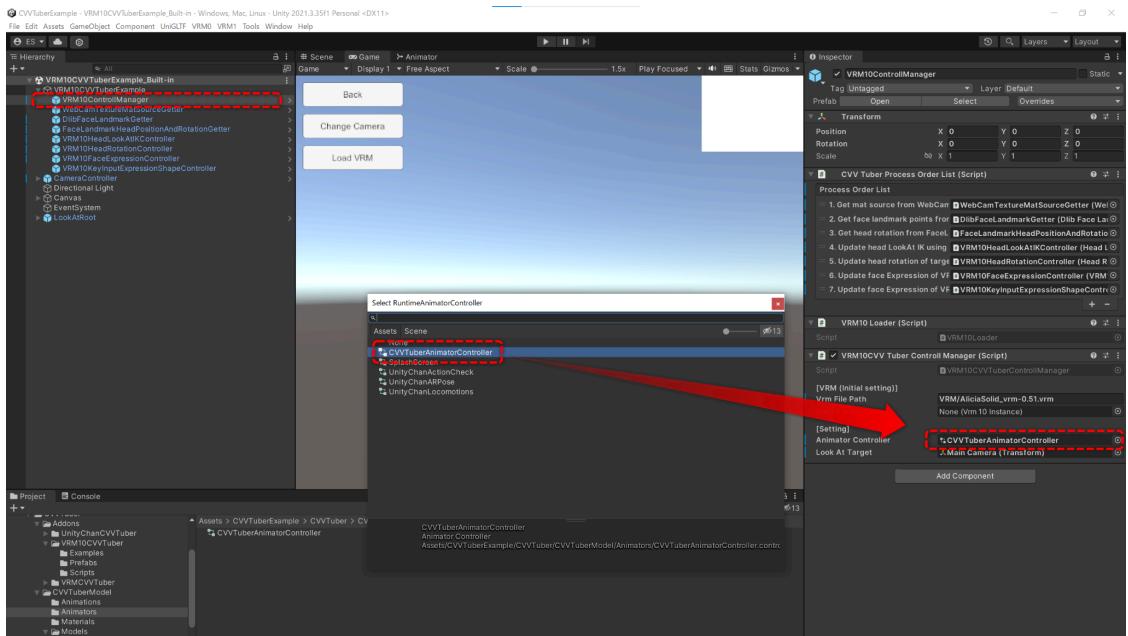
6. Create an "VRM" folder in the "Assets/StreamingAssets/" folder and place "AliciaSolid_vrm-0.51.vrm".



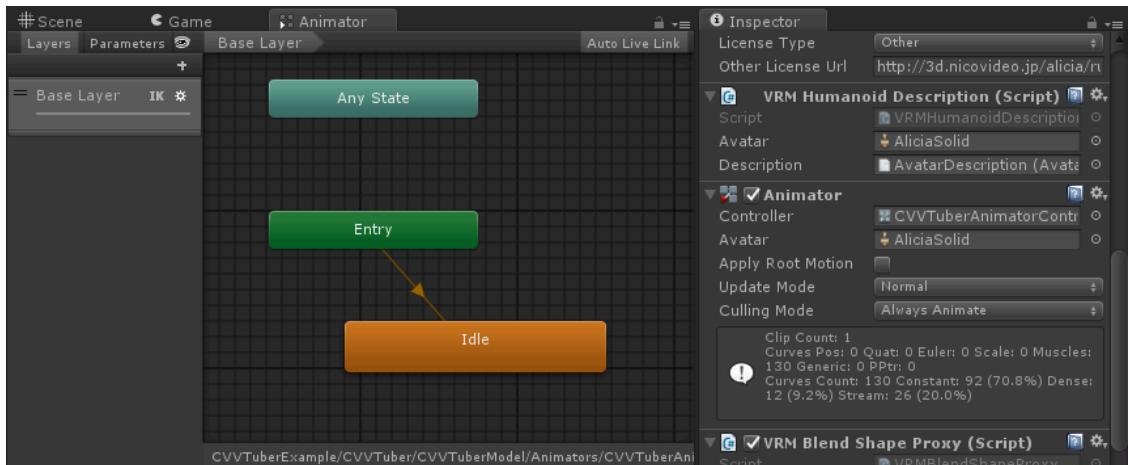
7. Set “VRM/AliciaSolid_vrm-0.51.vrm” to VRMFilePath of VRMCVVTuberControllManager.

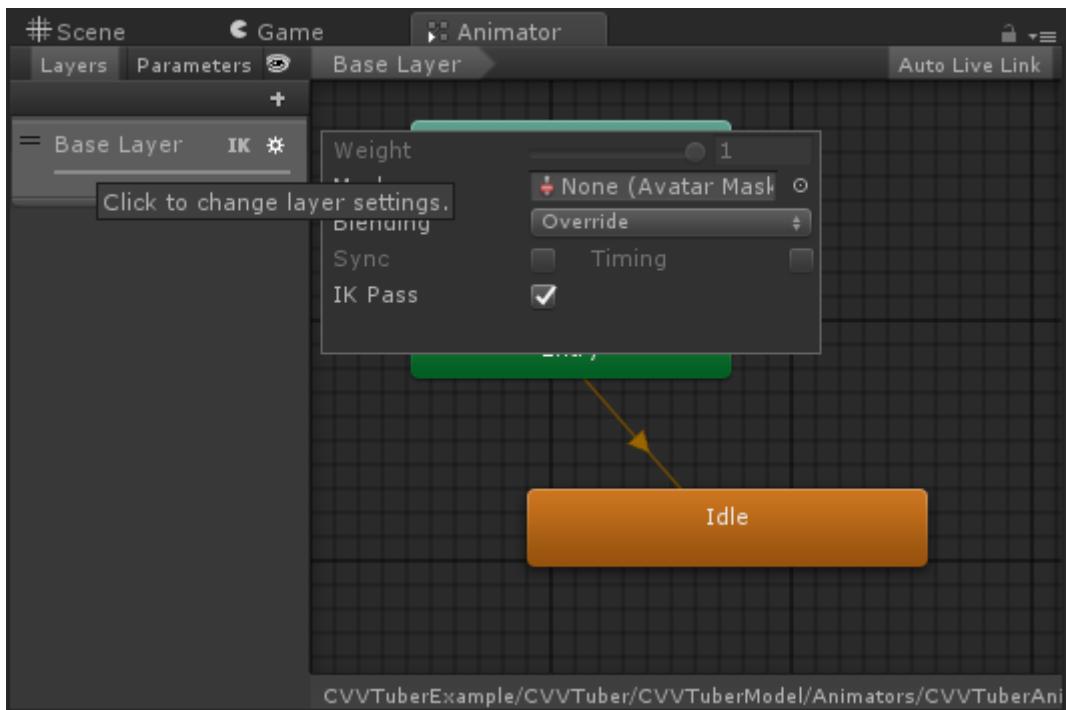


8. Set “CVVTuberAnimatorController” to AnimatorController of VRMCVVTuberControllManager.



9. Click on CVVTuberAnimatorController to open the Animator window. Enable IK Pass flag of “Base Layer”.





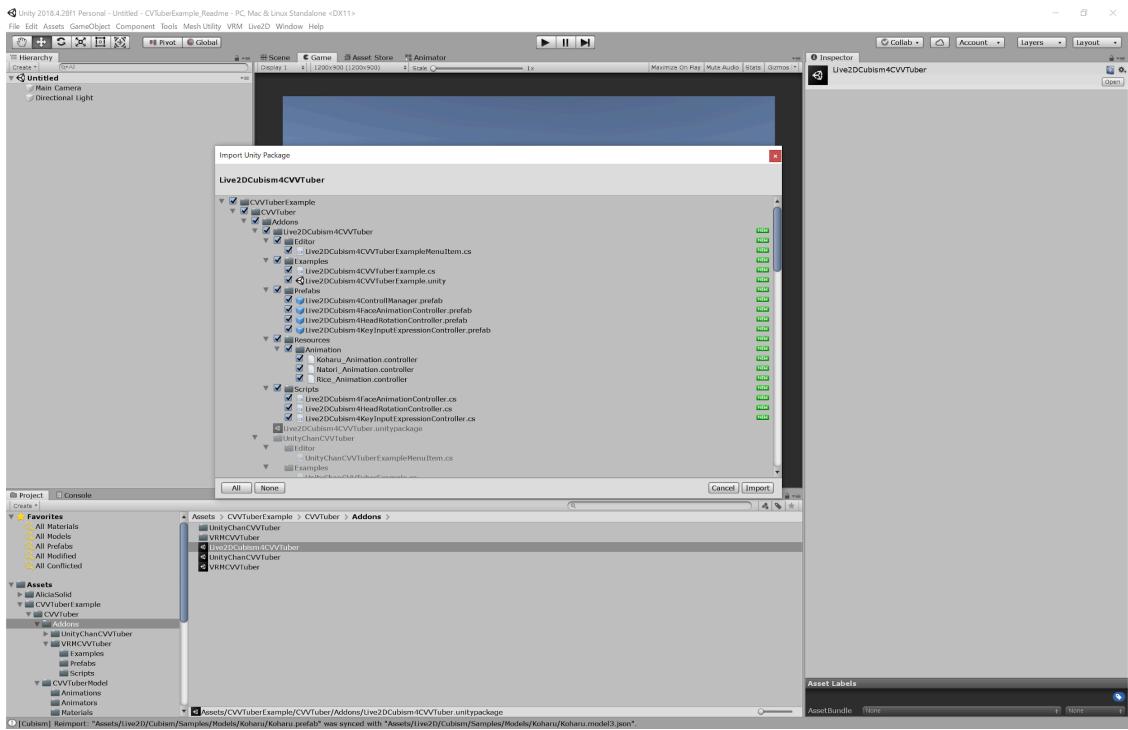
*In this example, a model set up with VRM format (0.x / 1.x) is also available.

*“VRM-0.124.2_dd50” is compatible with Unity 2021.3 LTS or later..

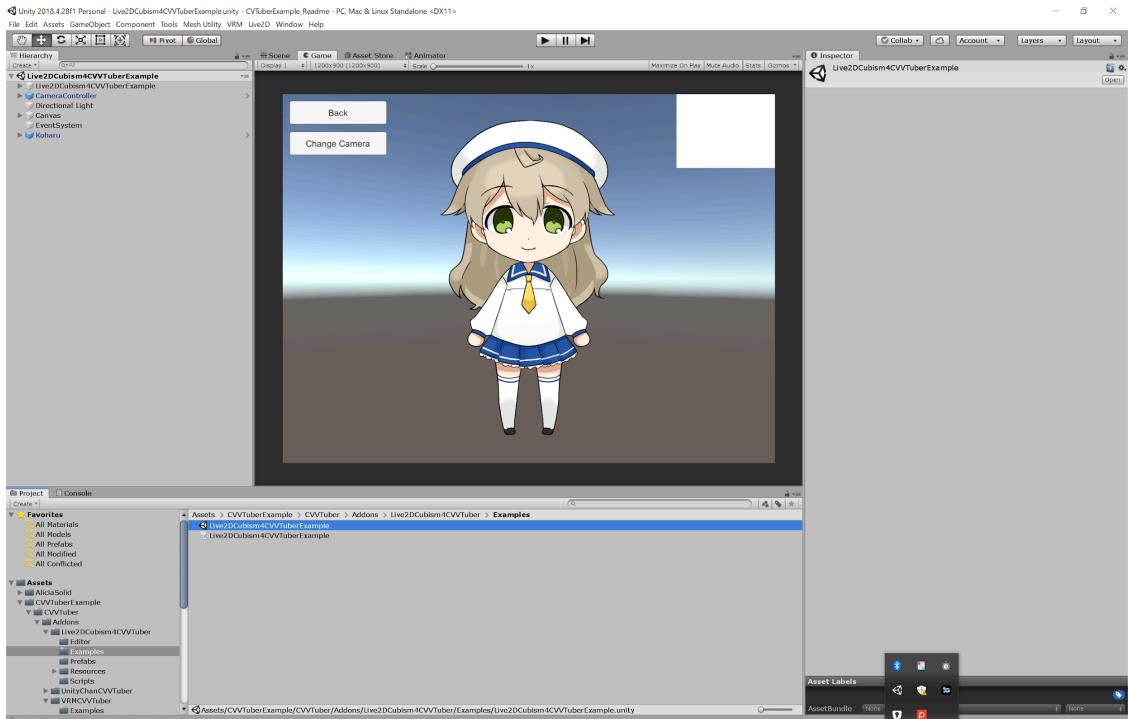
*The “Load VRM” button is only enabled on editor runs where the file selection dialog is available. To enable this feature on other platforms, consider adding a plugin such as “UnityStandaloneFileBrowser”.

Quick setup procedure to run the Live2DCubism5CVVTuberExample scene:

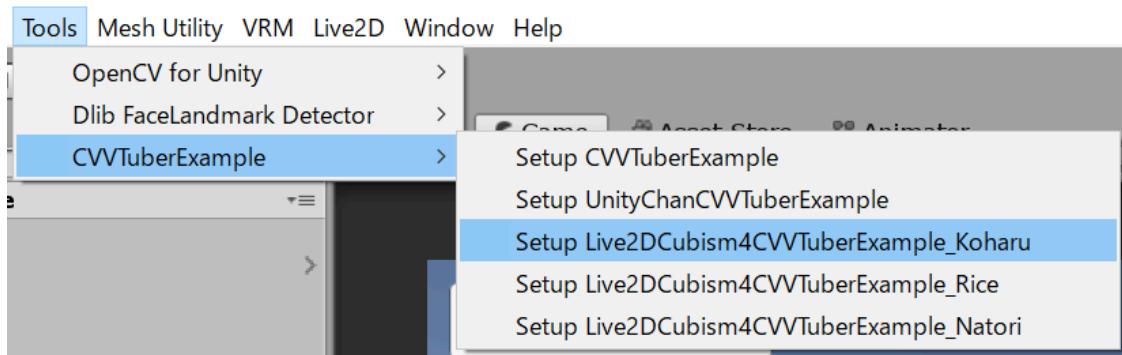
1. Download “CubismSdkForUnity-5-r.2.unitypackage” from [Live2D site](#).
2. Import CubismSdkForUnity-5-r.2.unitypackage.
3. Import
“Assets/CVVTuberExample/CVVTuber/Addons/Live2DCubism5CVVTuber.unitypackage”.



4. Open "Assets/CVVTuberExample/CVVTuber/Addons/Live2DCubism5CVVTuber/Live2DCubism5CVVTuberExample.unity" scene.



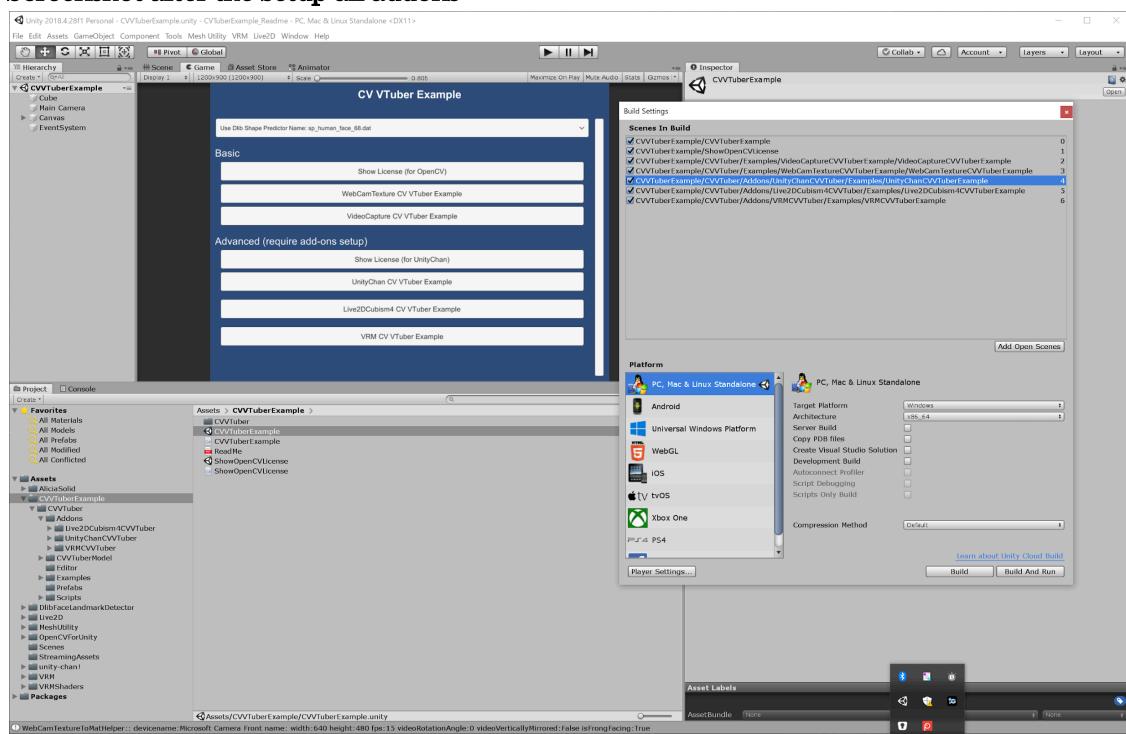
5. Select MenuItem[Tools/CVVTuberExample/ Setup Live2DCubism5CVVTuberExample_koharu].



*In this example, a model set up with Live2DCubism5 format is also available.

*“Cubism 5 SDK for Unity” is compatible with Unity version 2021 LTS or later.

Screenshot after the setup all addons



Q & A

Q1. HeadLookAtIkController does not work.

A1. Animator is not set to target of HeadLookAtIkController, or IK Pass of Base Layer of AnimatorController is not set to true.

Or AnimatorController is not set in the model's Animator.

Q2. HeadRotationController does not work.

A2. HeadRotationController target is not set. (Usually, set the Bone of the Head part)

Q3. The direction of rotation of HeadLookAtIkController or HeadRotationController is wrong.

A3. Please adjust invertAxis and rotateAxis settings.

* When creating and publishing an application using this asset, please check the licenses and terms of use of SDK or 3D model.