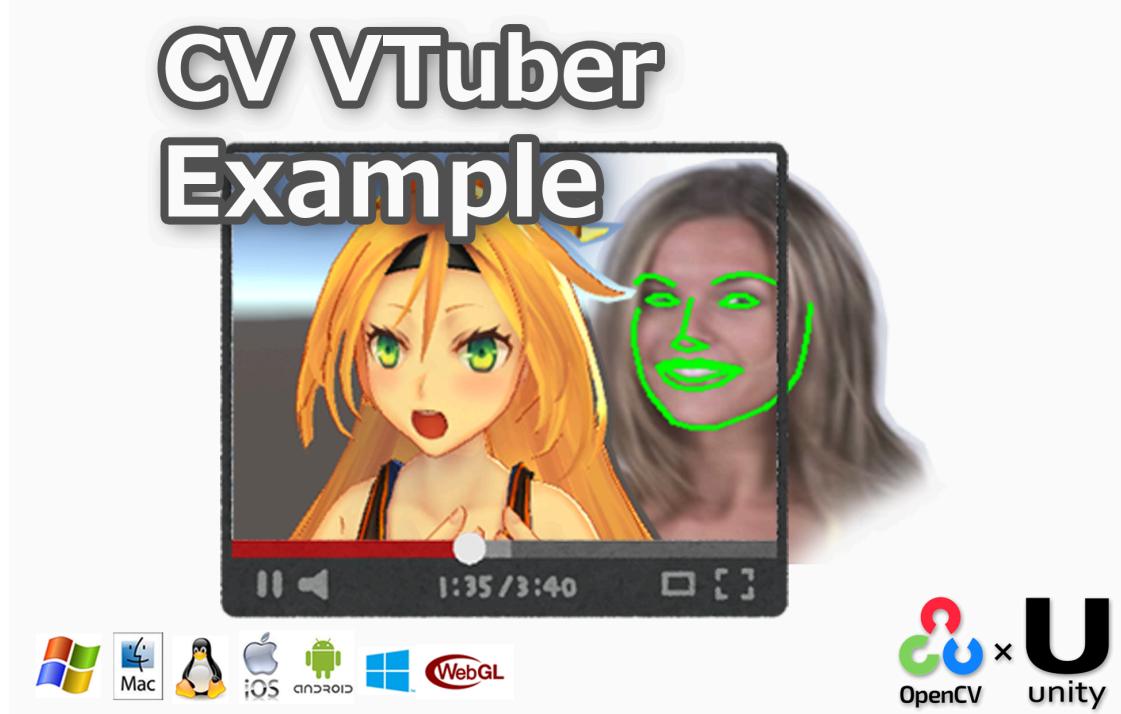


## CV VTuber Example 1.1.2



WebGL support  
iOS & Android support  
Windows10 UWP support  
**Win & Mac & Linux** Standalone support  
Support for preview in the **Editor**  
**Work with Unity Free & Pro**

### System Requirements

Build Win Standalone & Preview Editor : Windows8 or later  
Build Mac Standalone & Preview Editor : OSX 10.13 or later

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:**

- 1.1.2** [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-r2.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.

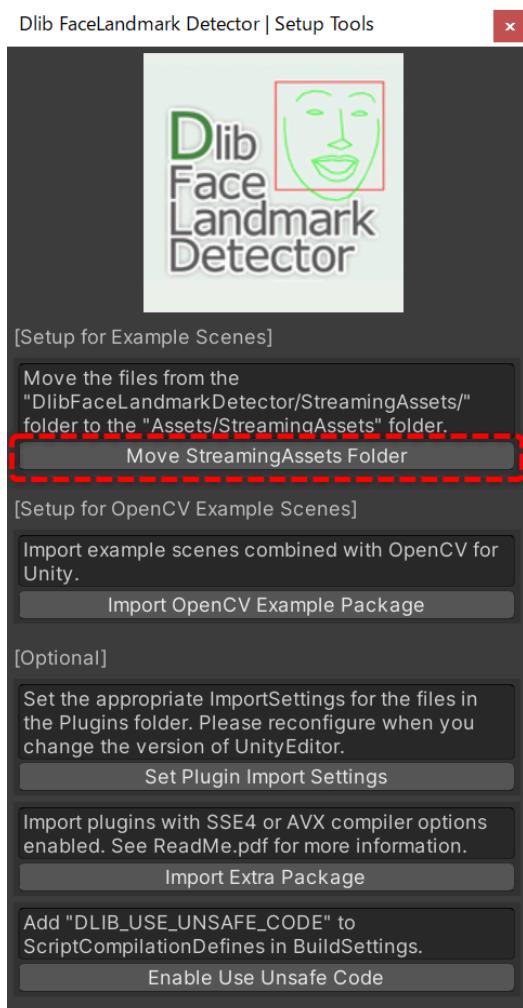
**1.0.2** [Common]Updated for OpenCV for Unity v2.3.3.( This asset requires OpenCVforUnity 2.3.3 or later.) [Common]Updated for Dlib FaceLandmark Detector v1.2.5.( This asset requires Dlib FaceLandmark Detector 1.2.5 or later.)

**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.

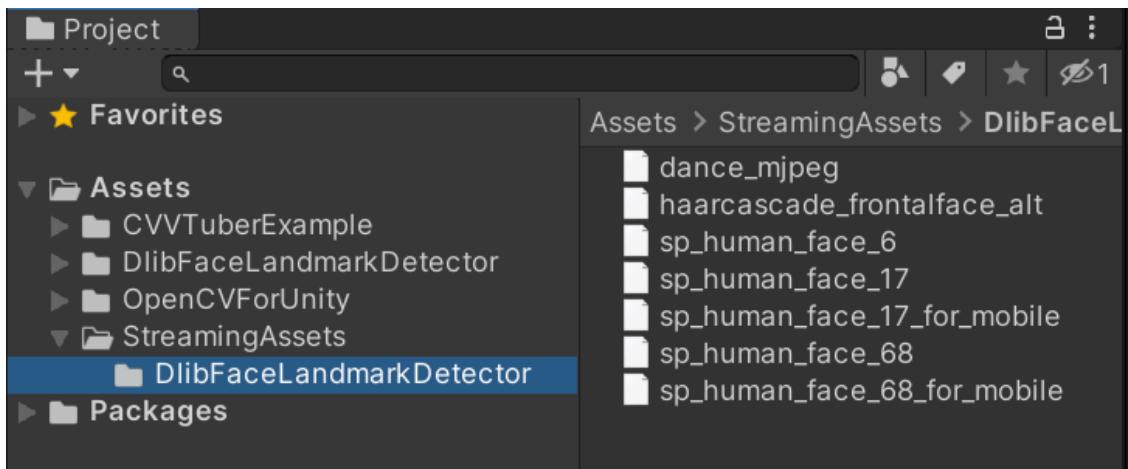
**1.0.0** Initial version.

## Quick setup procedure to run the Basic Example scenes:

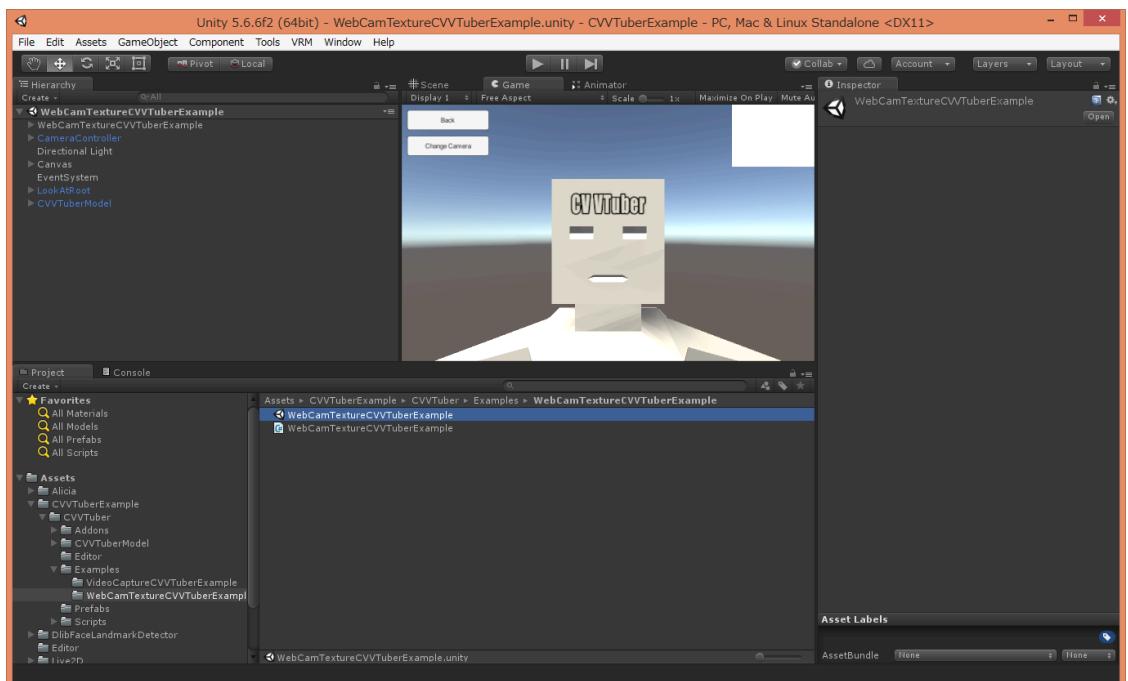
1. Import "[CVVTuberExample](#)". (If there is a previous version of CVVTuberExample in the project, please delete the CVVTuberExample folder first and then import the new version.)
2. Import "[OpenCVForUnity](#)".
3. Import "[Dlib FaceLandmark Detector](#)".
4. Select MenuItem[Tools/Dlib FaceLandmark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



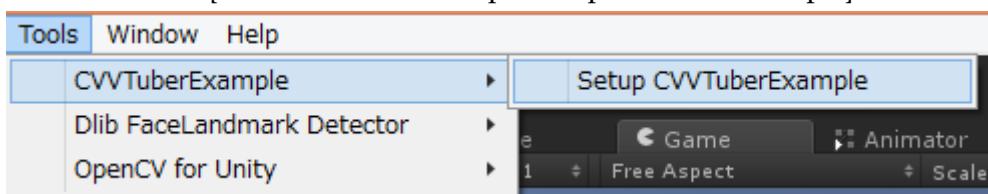
The following files are the only files required for this Example, so other files may be deleted.



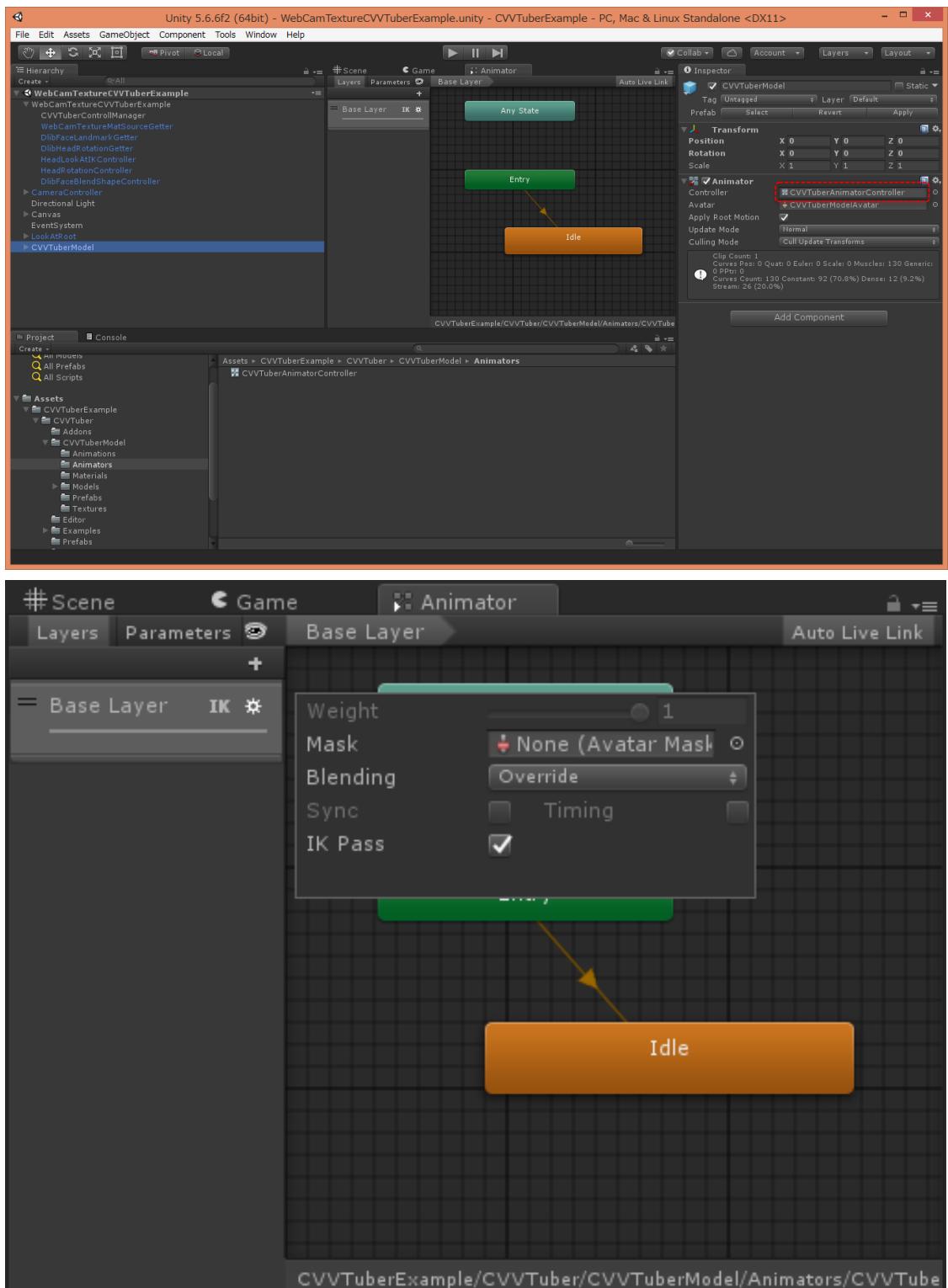
5. Open "Assets/CVVTuberExample/CVVTuber/Examples/MultiSourceCVVTuberExample" scene.



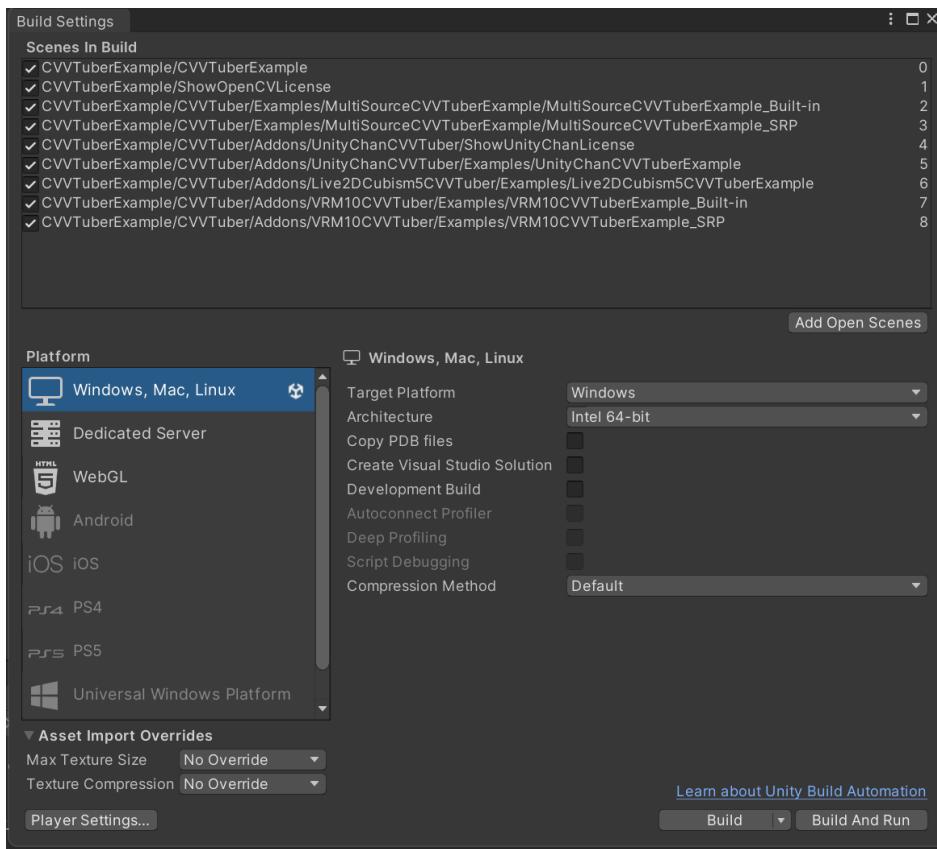
6. Select MenuItem[Tools/CVVTuberExample/Setup CVVTuberExample].



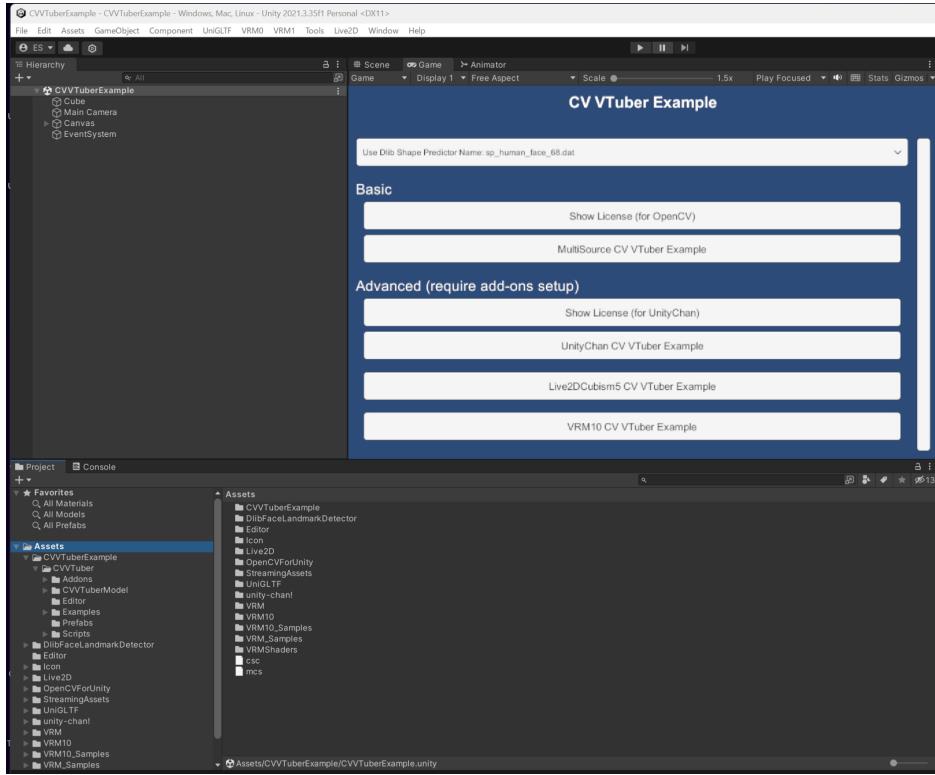
7. Click on CVVTuberAnimatorController to open the Animator window. Enable IK Pass flag of "Base Layer".



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

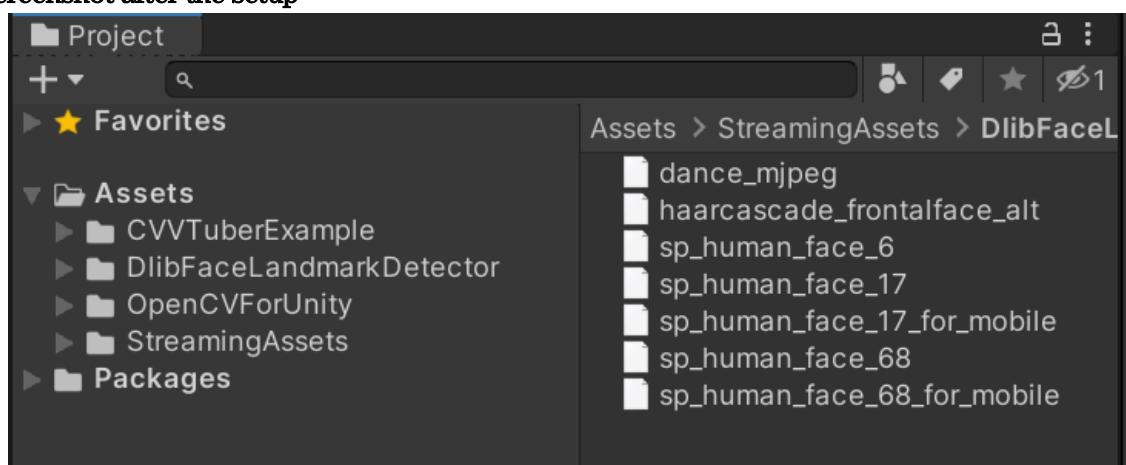


## 9. Run the CVVTuberExample scene.





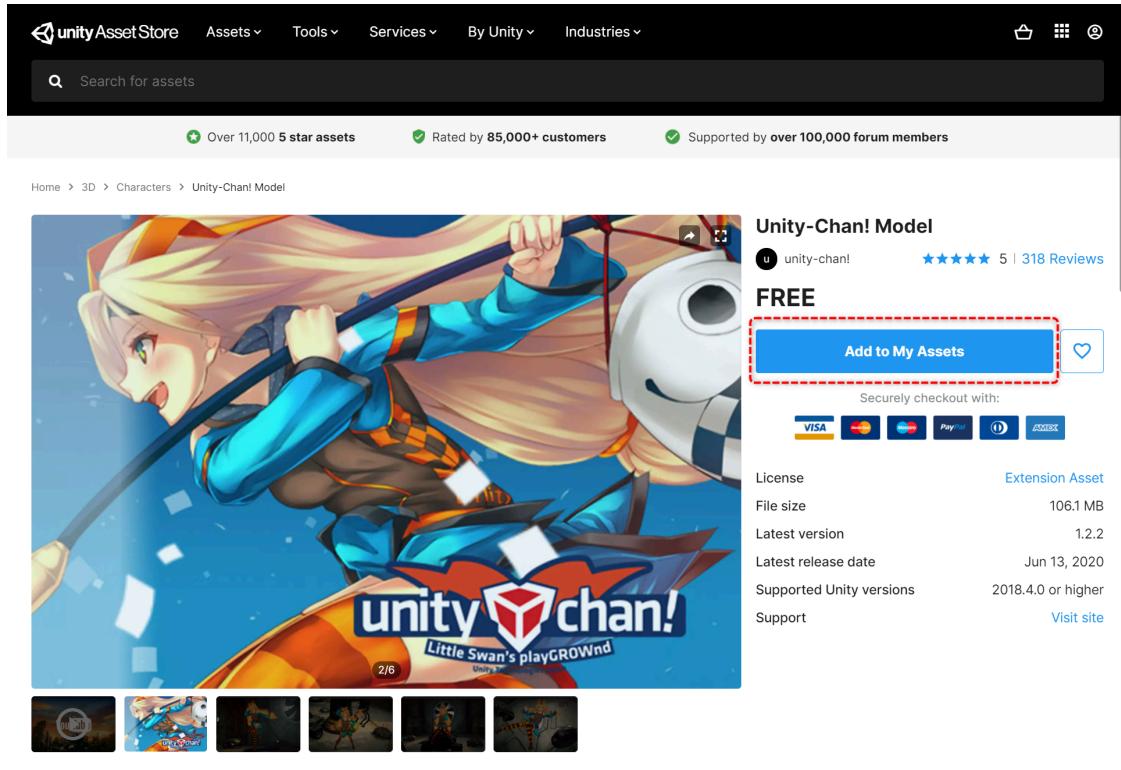
Screenshot after the setup



\*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](#).

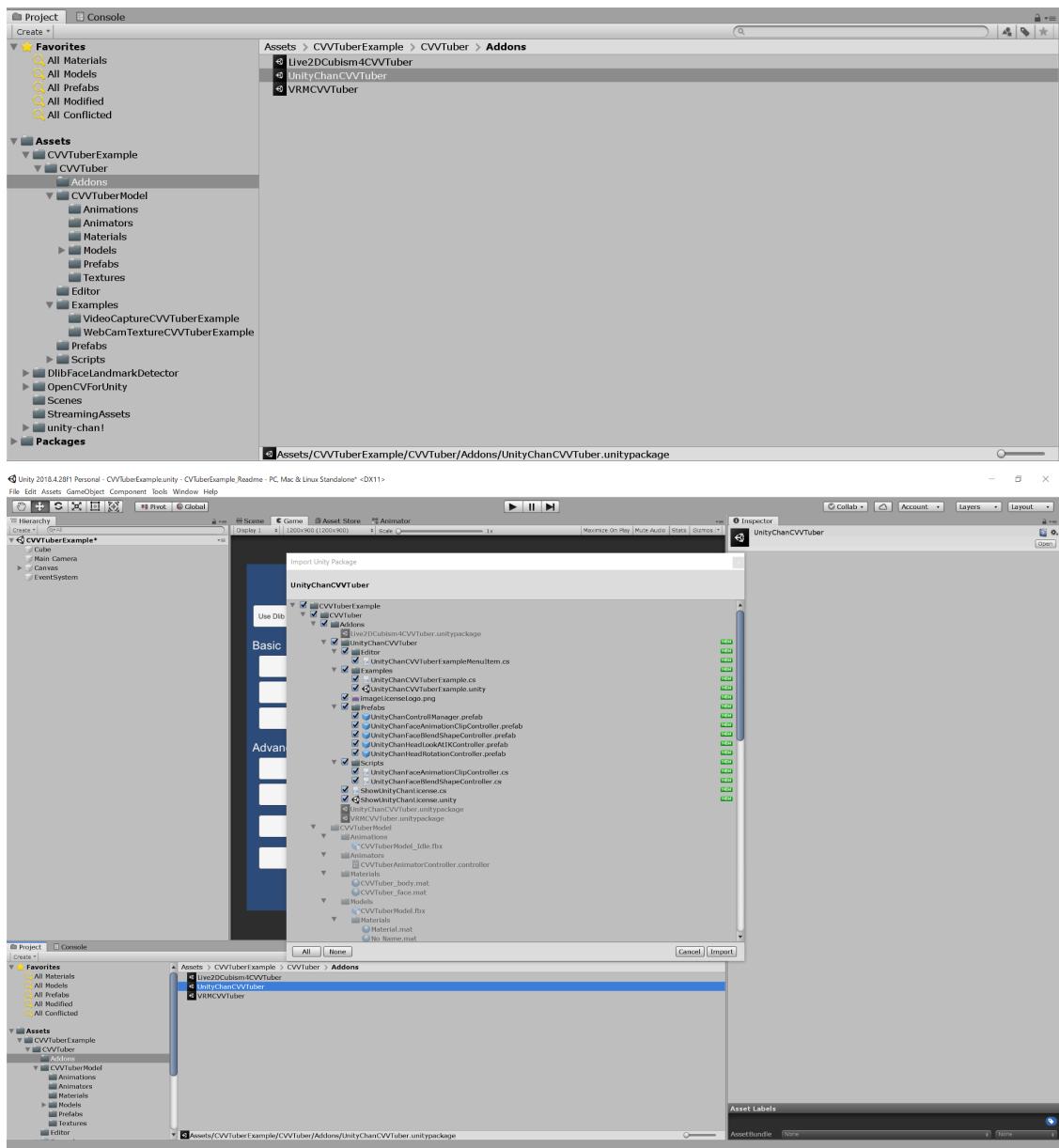


- ## 2. Import “Unity-Chan! Model”.

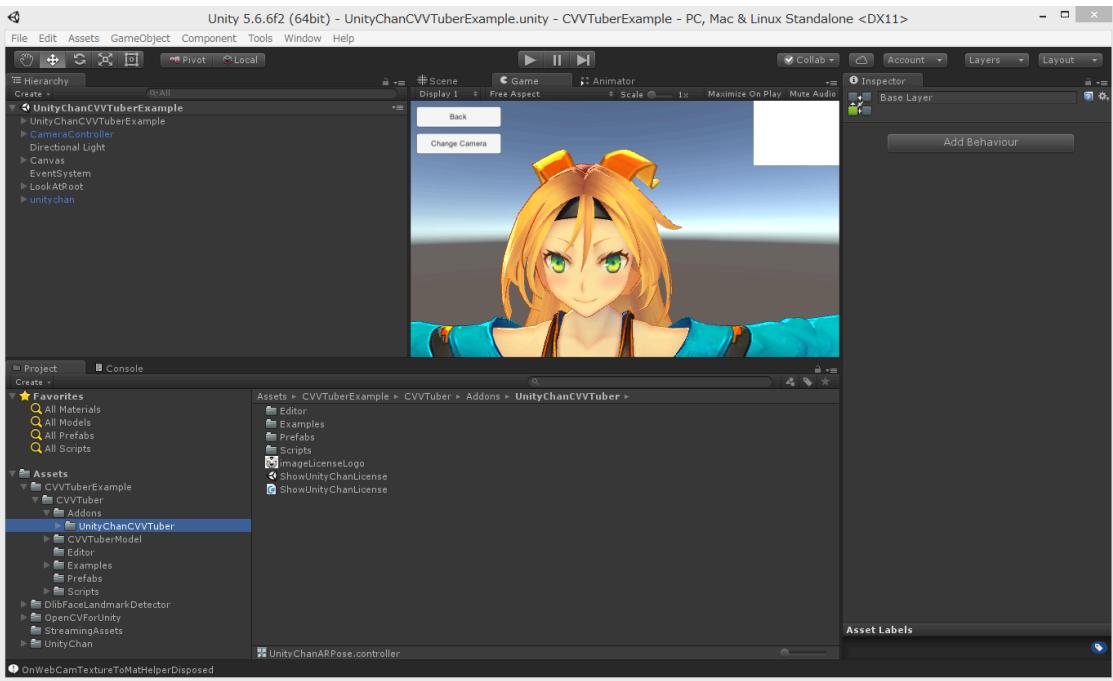


- ### 3. Import

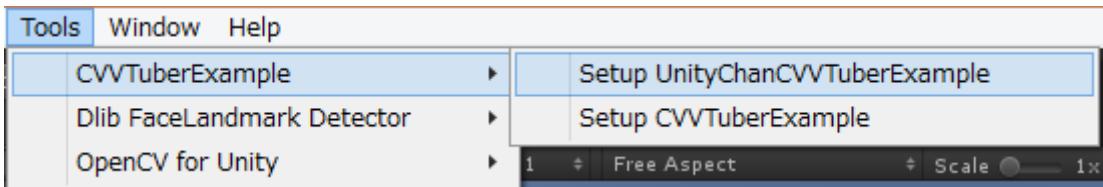
“Assets/CVVTuberExample/CVVTuber/Addons/UnityChanCVVTuber.unitypackage”。



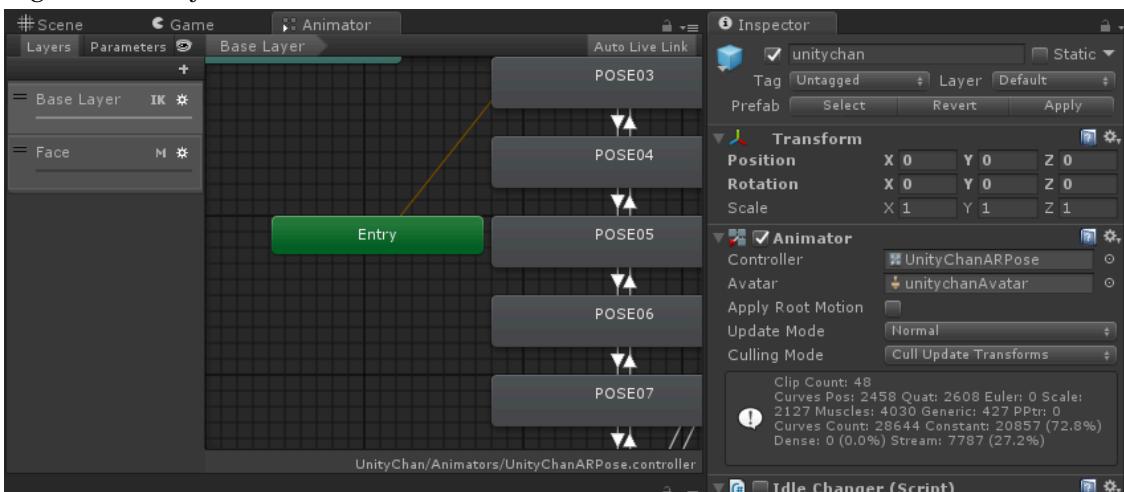
4. Open “Assets/CVVTuberExample/CVVTuber/Addons/UnityChanCVVTuber/Examples/UnityChanCVVTuberExample.unity” scene.

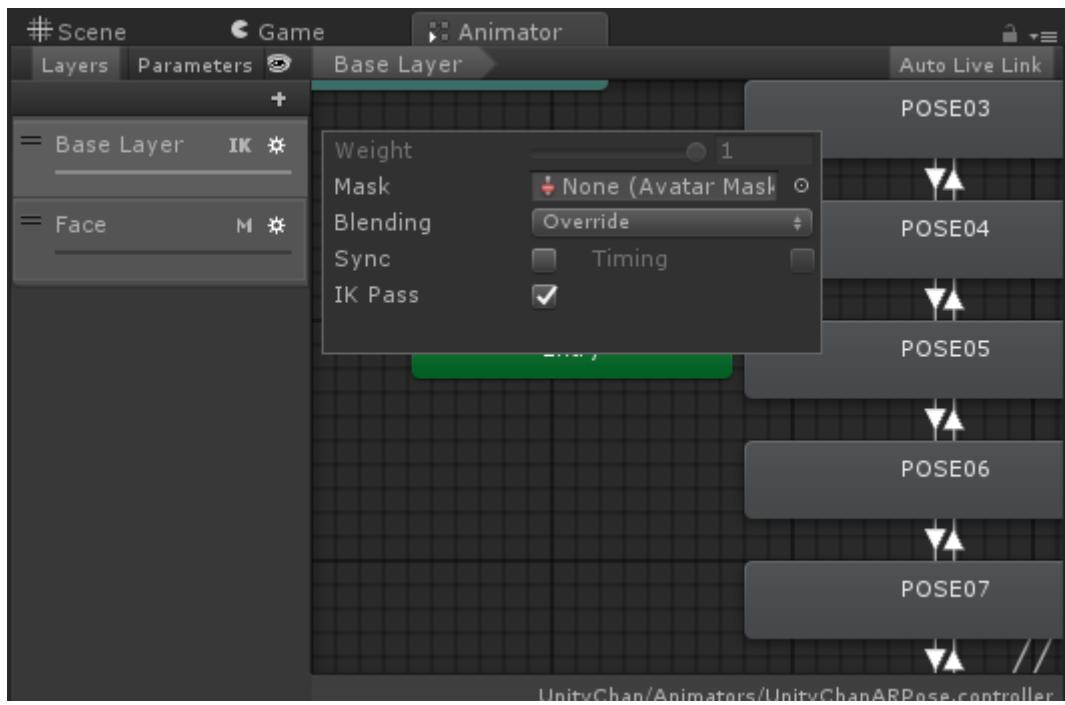


5. Select MenuItem[Tools/CVVTuberExample/ Setup UnityChanCVVTuberExample].



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

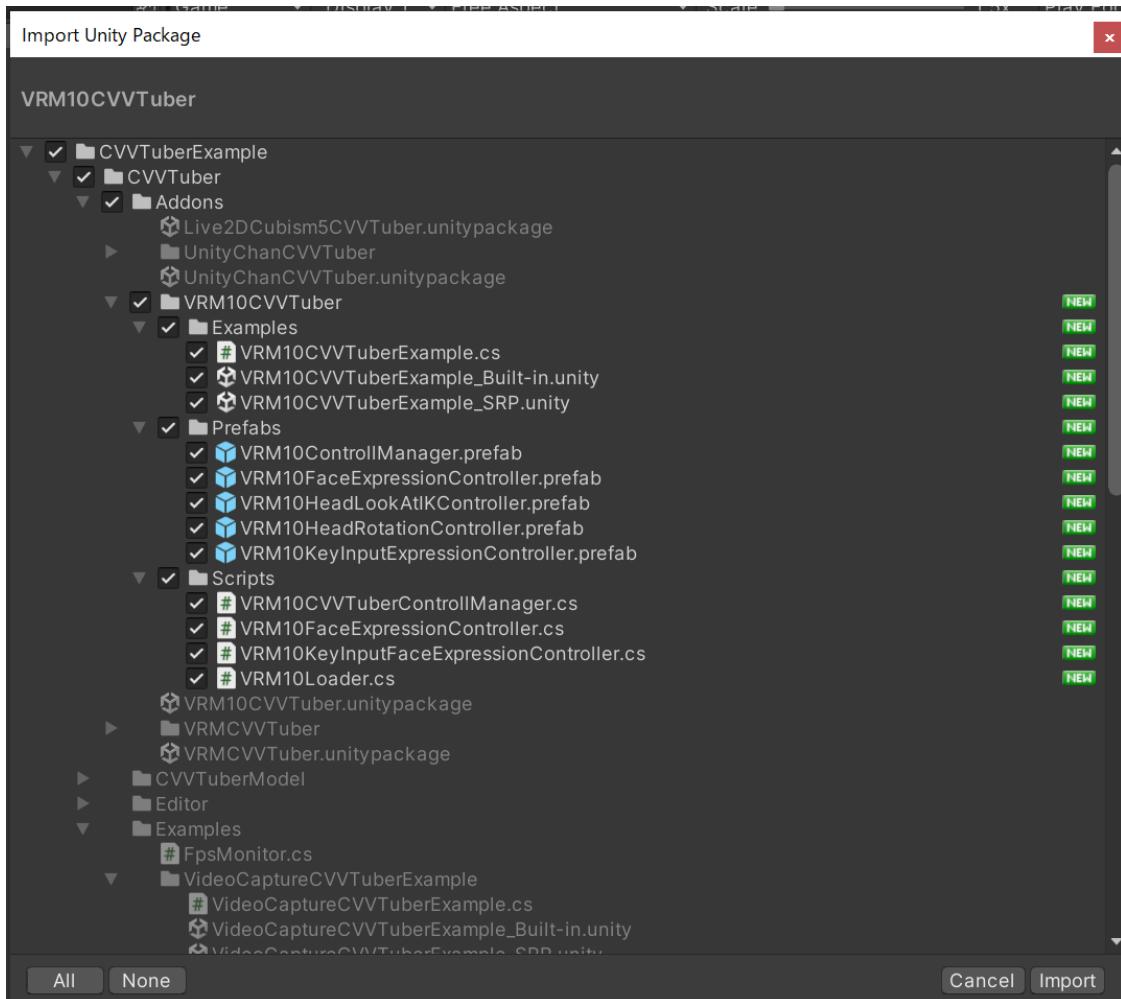




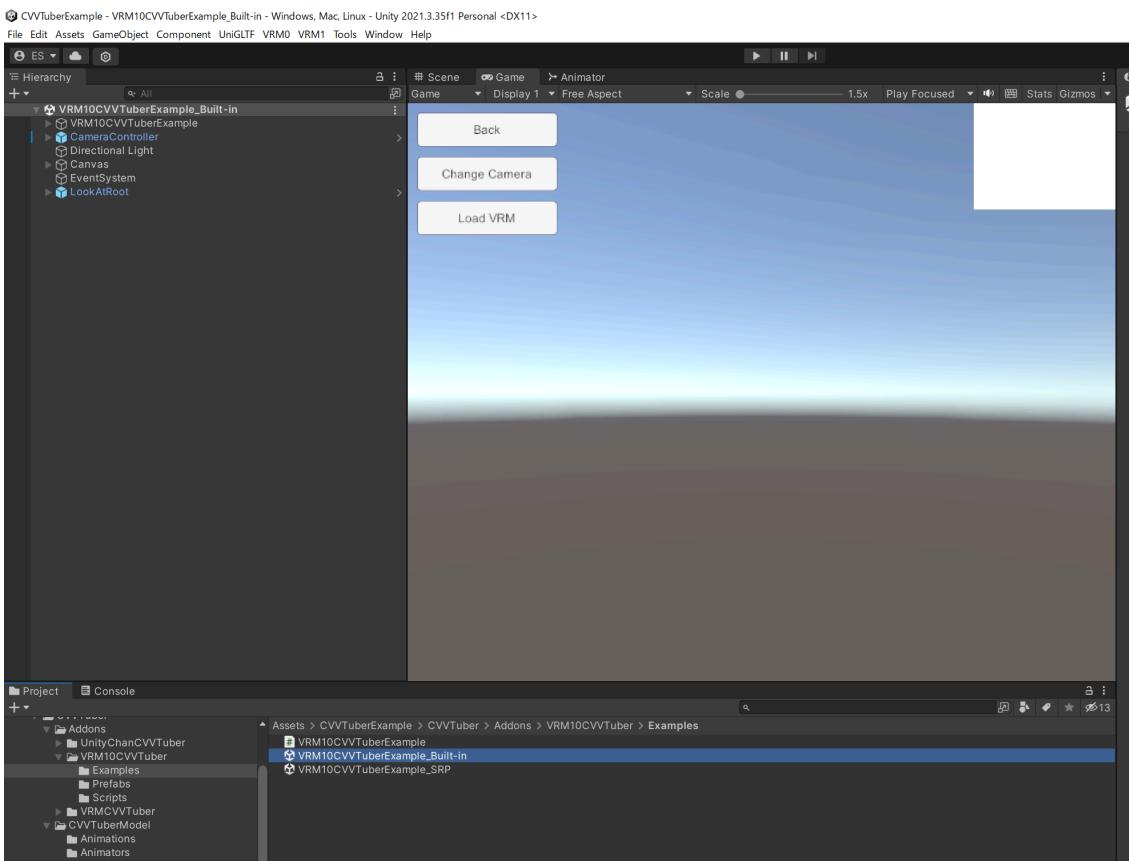
\*In this example, a model set up with UnityChan format is also available.

## 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”.



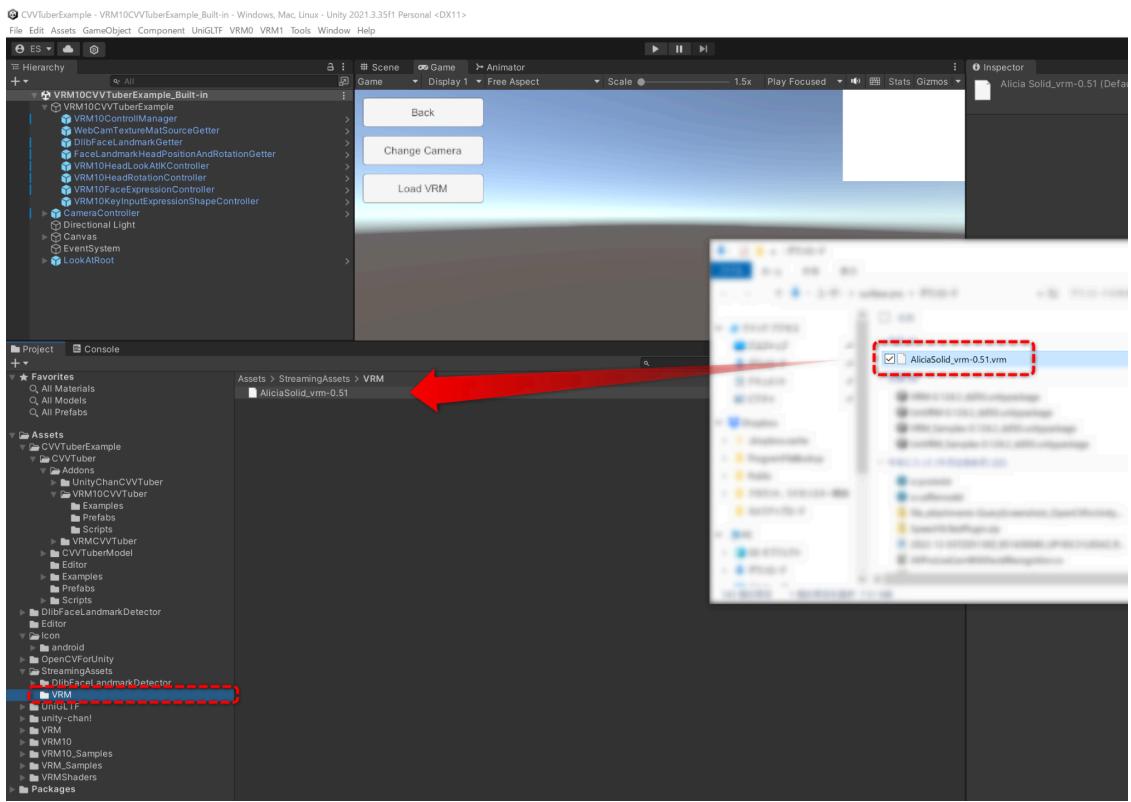
4. Open “Assets/CVVTuberExample/CVVTuber/Addons/VRM10CVVTuber/Examples/VRM10CVVTuberExample.unity” scene.



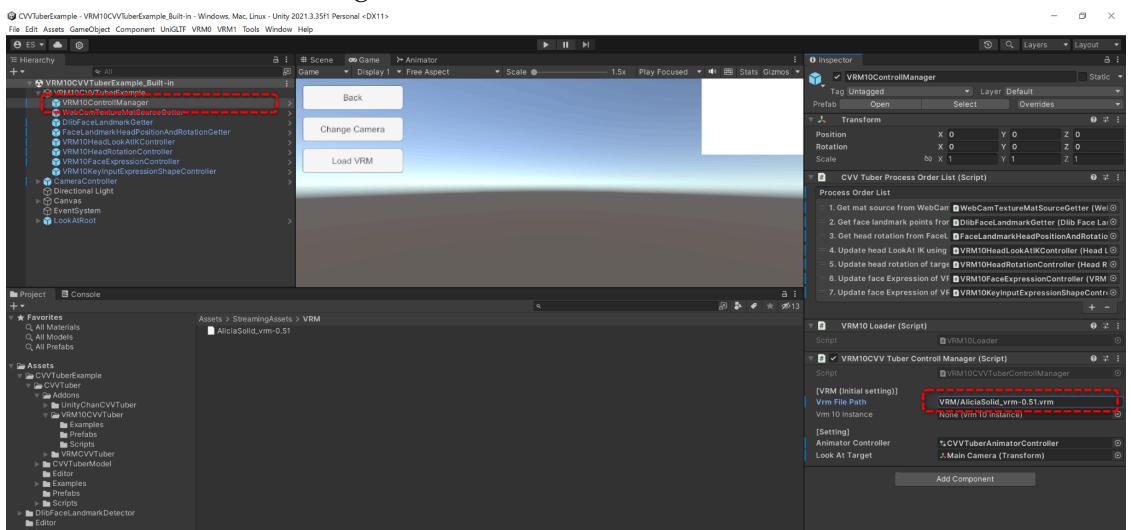
5. Download "AliciaSolid\_vrm-0.51.vrm" from [GitHub vrm-c/UniVRM/Tests/Models/Alicia\\_vrm-0.51/](#).

The screenshot shows a GitHub repository page for the 'vrm-c/UniVRM' repository. The 'Code' tab is active. A specific commit is highlighted, showing the file 'AliciaSolid\_vrm-0.51.vrm'. This file is circled with a red dashed line.

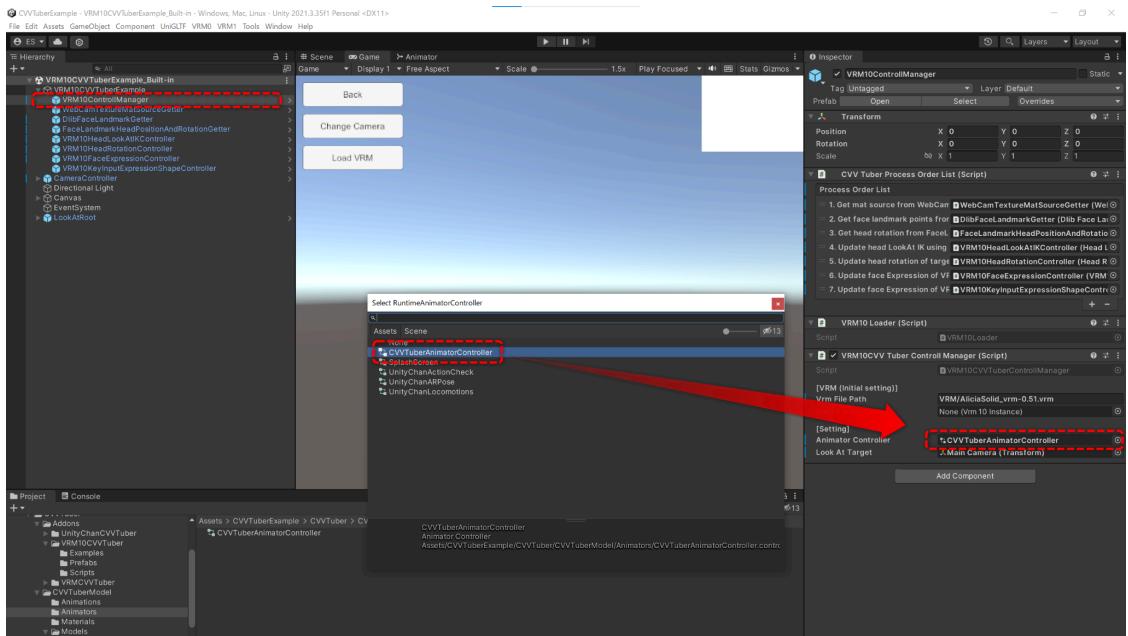
6. Create an "VRM" folder in the "Assets/StreamingAssets/" folder and place "AliciaSolid\_vrm-0.51.vrm".



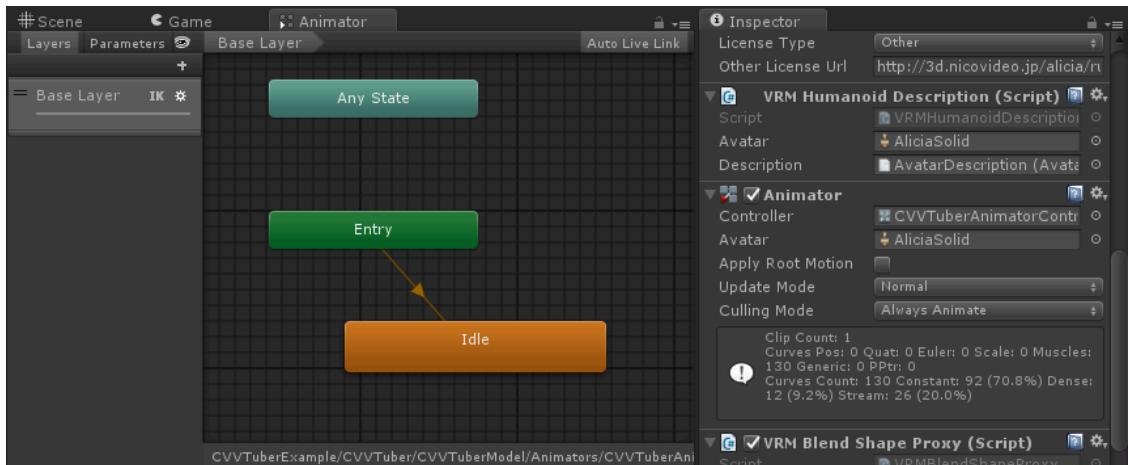
7. Set “VRM/AliciaSolid\_vrm-0.51.vrm” to VRMFilePath of VRMCVVTuberControllManager.

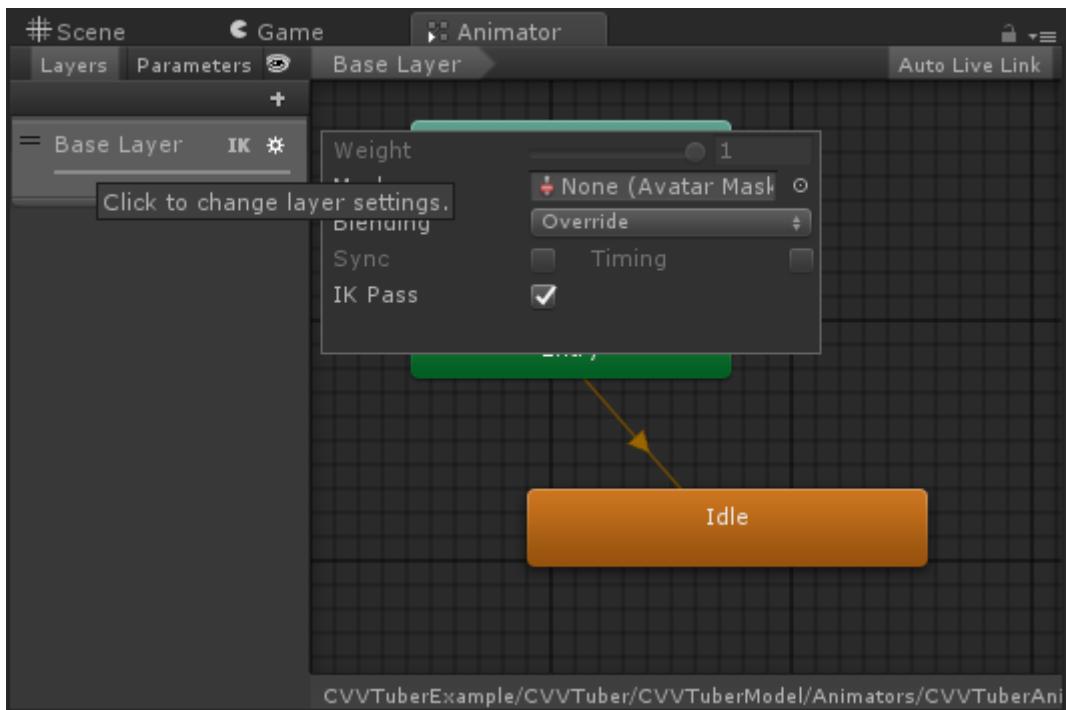


8. Set “CVVTuberAnimatorController” to AnimatorController of VRMCVVTuberControllManager.



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





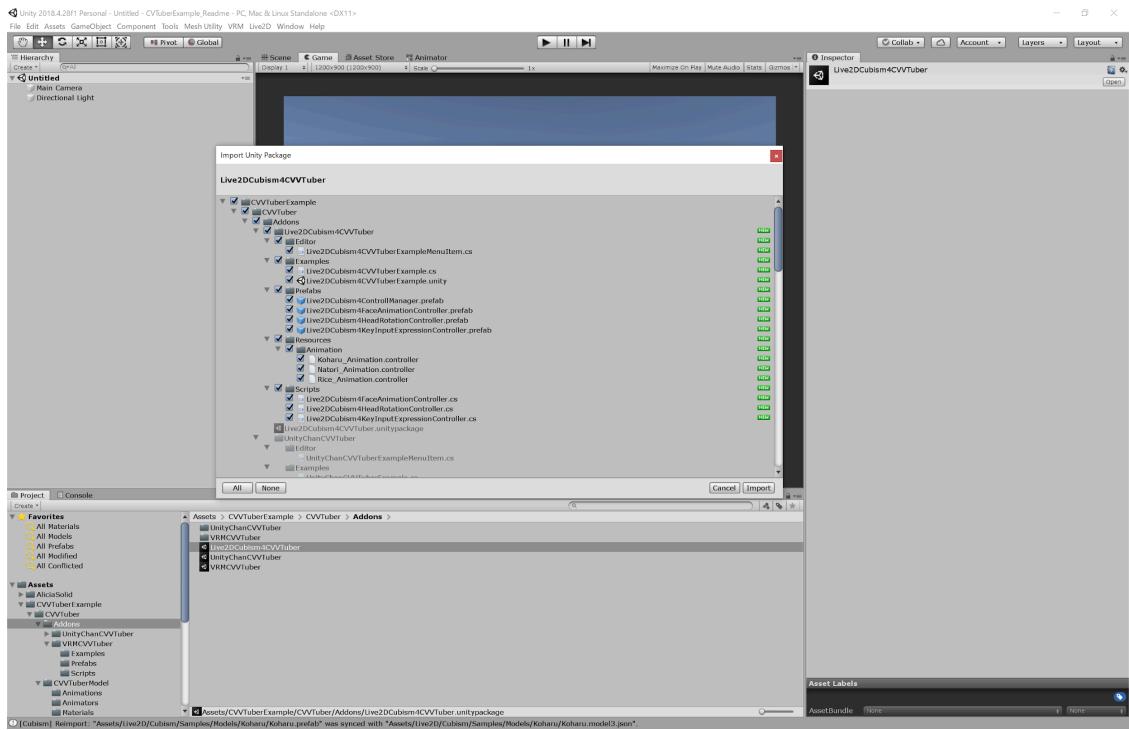
\*In this example, a model set up with VRM format (0.x / 1.x) is also available.

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

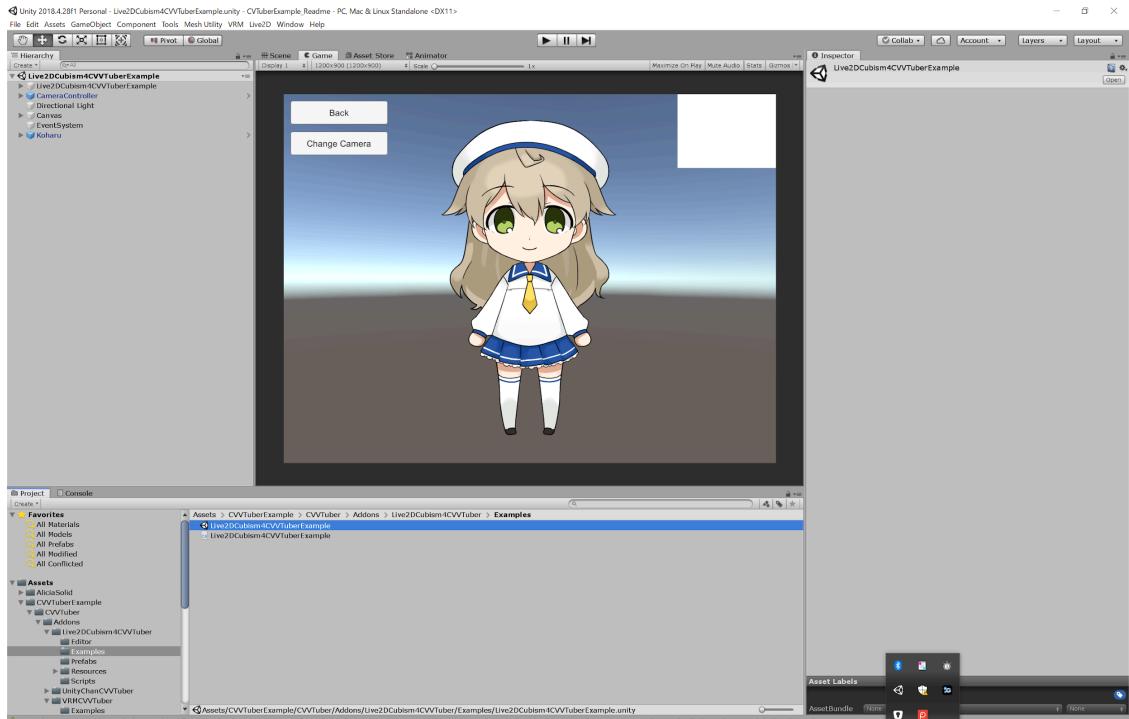
\*The “Load VRM” button is only enabled on editor runs where the file selection dialog is available. To enable this feature on other platforms, consider adding a plugin such as “UnityStandaloneFileBrowser”.

#### Quick setup procedure to run the Live2DCubism5CVVTuberExample scene:

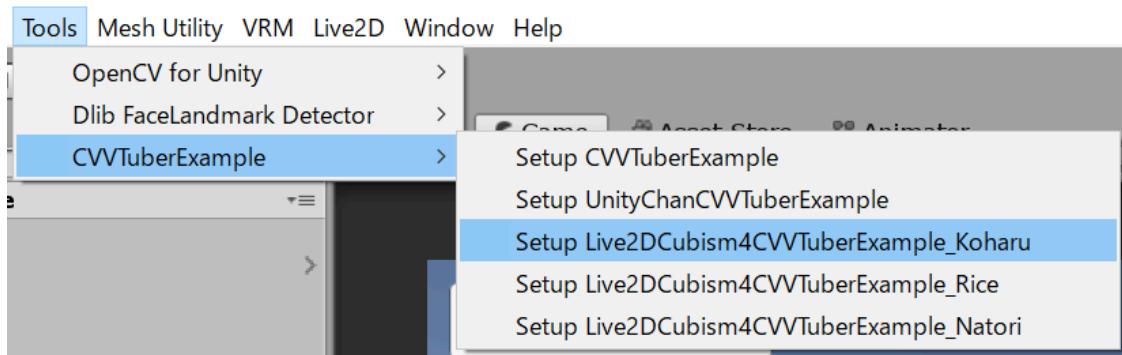
1. Download “CubismSdkForUnity-5-r.2.unitypackage” from [Live2D site](#).
2. Import CubismSdkForUnity-5-r.2.unitypackage.
3. Import  
“Assets/CVVTuberExample/CVVTuber/Addons/Live2DCubism5CVVTuber.unitypackage”.



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



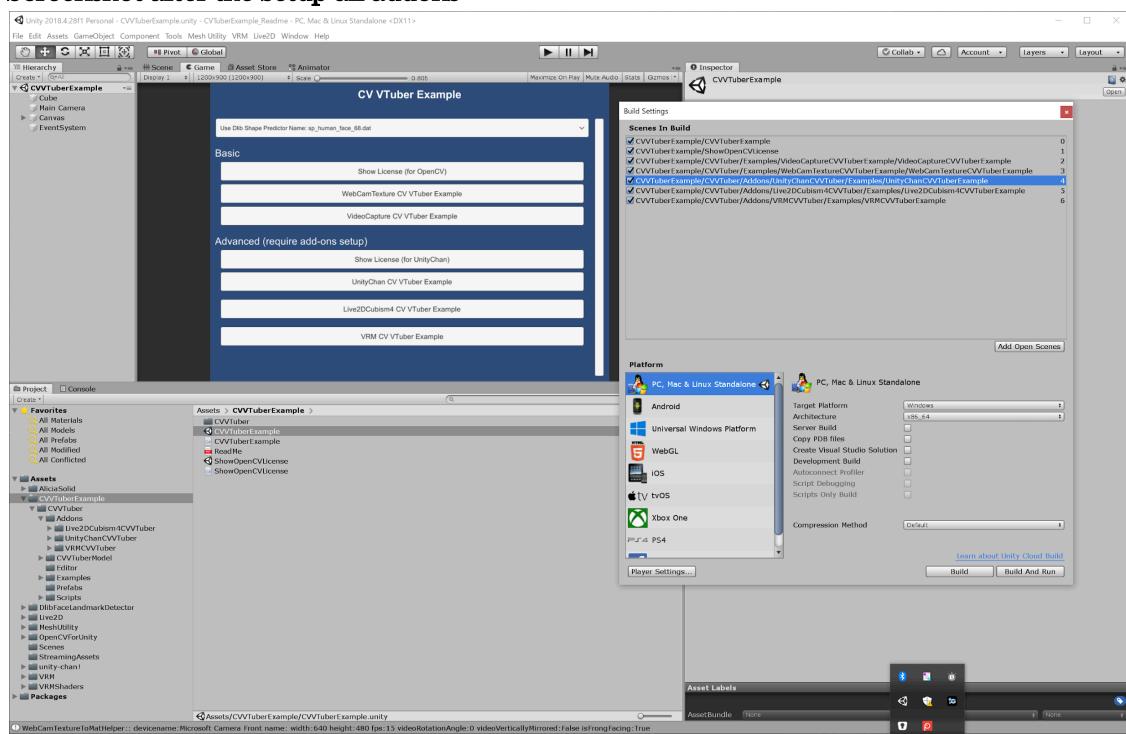
5. Select MenuItem[Tools/CVVTuberExample/ Setup Live2DCubism5CVVTuberExample\_koharu].



\*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.**