Animator State Machines

CS 11SI

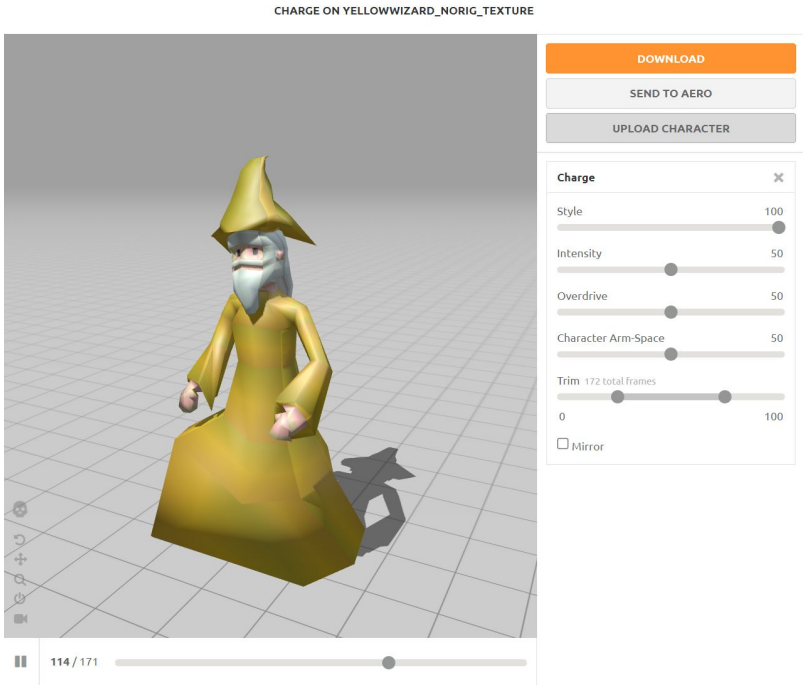
Overall Steps: Model & Rigging

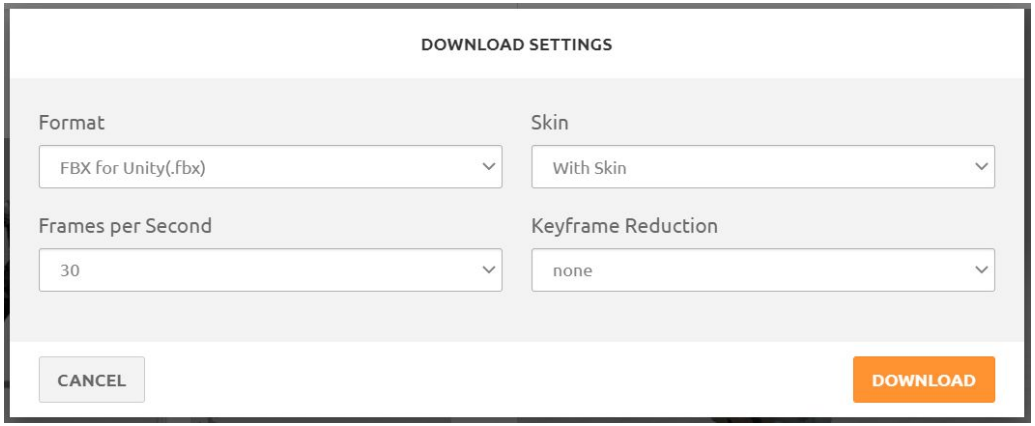
1. Blender model → save as .fbx
2. Go to Mixamo: upload character, rig, and save animation
    a. FBX for Unity; with skin
3. Go to Unity and upload model.
4. In model's inspector
    a. *Materials > Extract texture*
    b. *Rig > Humanoid*
        i. Avatar type: humanoid
        ii. Avatar definition (for default state): create from this model
        iii. Avatar definition (for other models): copy from other avatar

Overall Steps: Animator Controller

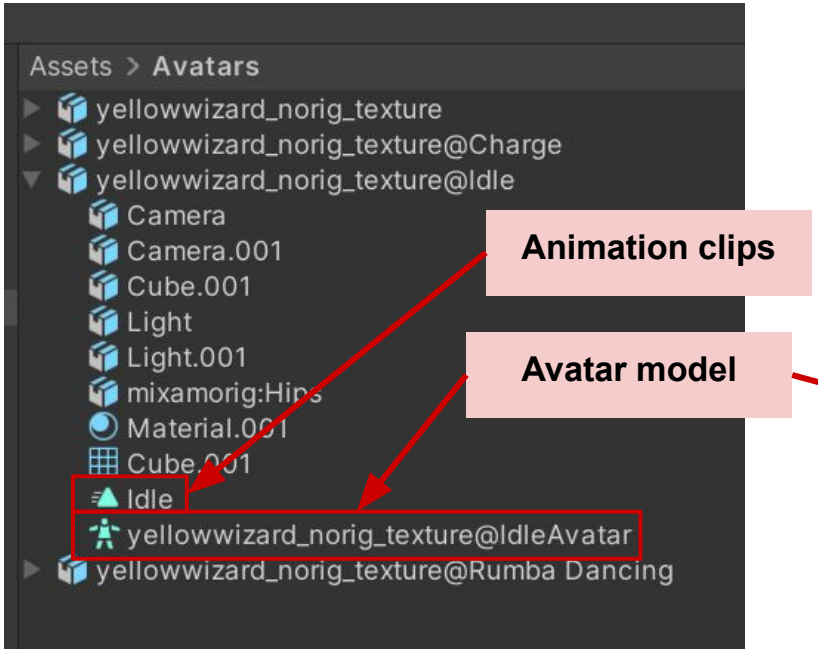
1. Duplicate animation clips (ex: idle, dance, etc.) into another folder.
2. Go to Unity project. Right click *create* > *Animator Controller*
3. In Animator Controller panel
    a. Drag all animation clips to the panel (default state is orange → can change with right click)
    b. Right click on animation states to add transition arrows
    c. Add parameters
    d. Click on transition arrows to add condition parameters
4. Scripting!

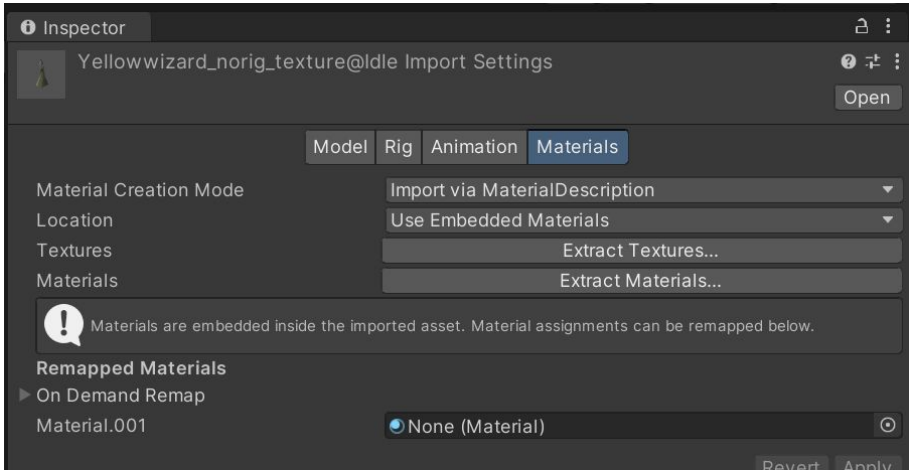
Mixamo settings

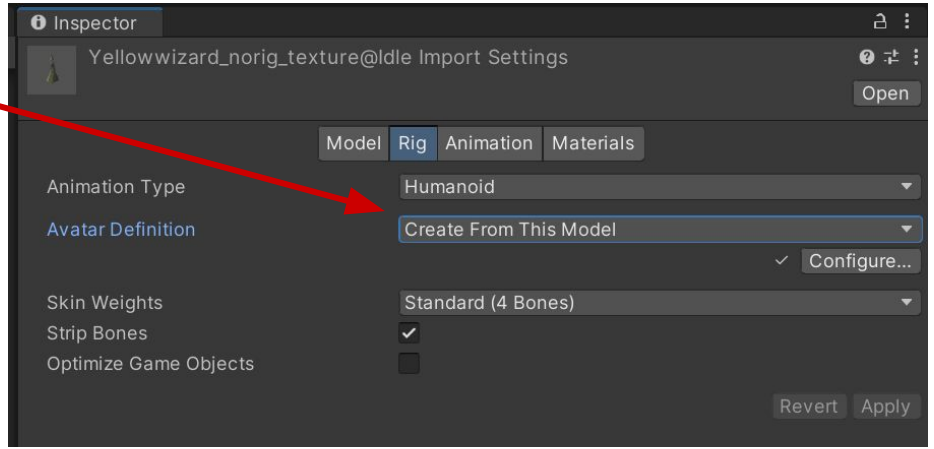




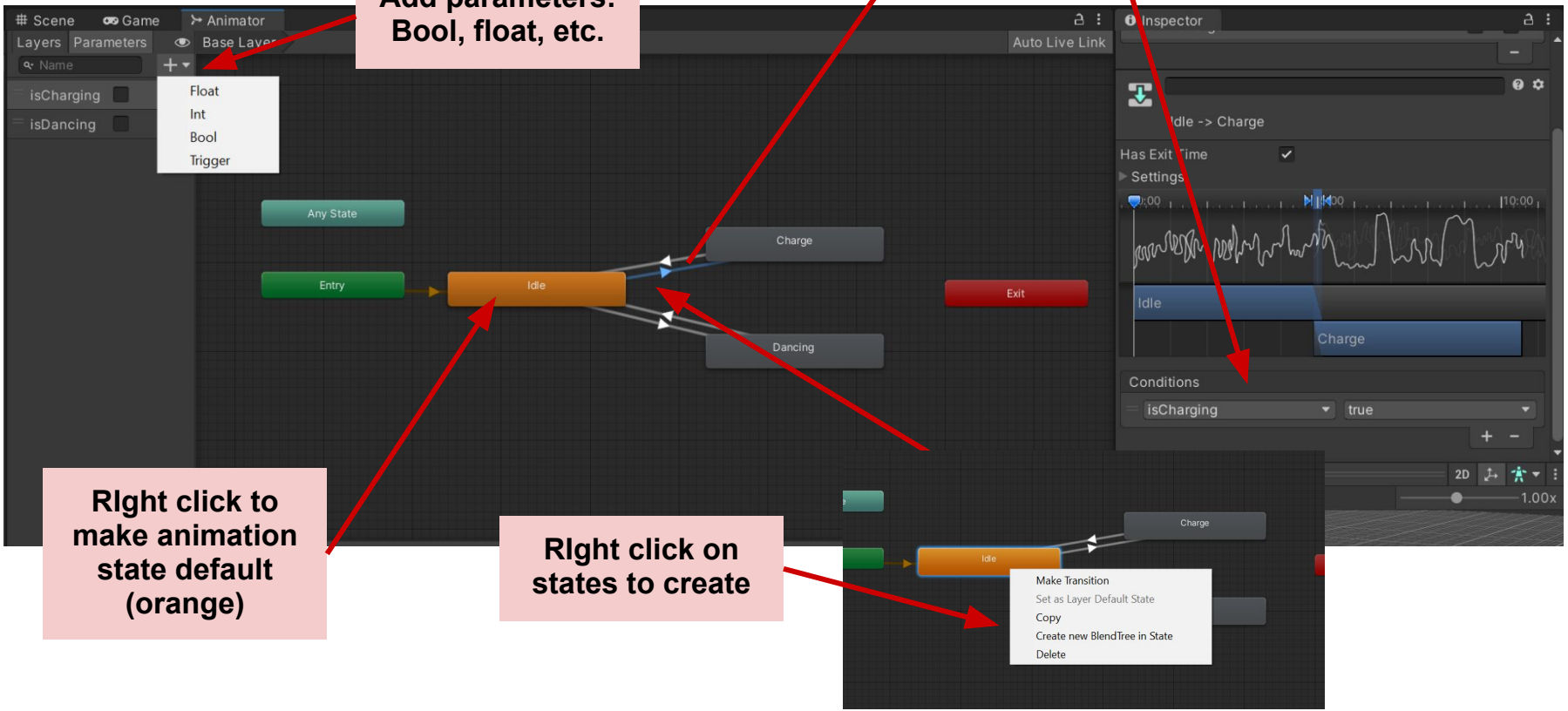
Avatar settings in Unity







The **Animator** panel



Scripting!

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;

Unity Script (1 asset reference) | 0 references
public class WizardMovement : MonoBehaviour
{
    Animator myAnimator;
    // Start is called before the first frame update
    Unity Message | 0 references
    void Start()
    {
        // get animator component from object
        myAnimator = GetComponentInChildren<Animator>();

        // set default bool params to be false
        myAnimator.SetBool("isTwerking", false);
        myAnimator.SetBool("isCharging", false);
    }
```

```
    // Update is called once per frame
    Unity Message | 0 references
    void Update()
    {
        // if pressing left shift key, wizard will enter dancing mode
        if (Input.GetKey("left shift"))
        {
            myAnimator.SetBool("isTwerking", true);
            // Debug.Log("twerking"); //-> a way to debug your code!
        }
        if (!Input.GetKey("left shift"))
        {
            myAnimator.SetBool("isTwerking", false);
        }

        // if pressing right shift key, wizard will enter charging mode
        if (Input.GetKey("right shift"))
        {
            myAnimator.SetBool("isCharging", true);
        }
        if (!Input.GetKey("right shift"))
        {
            myAnimator.SetBool("isCharging", false);
        }
    }
}
```