

# CHINESE CYBORG WARRIOR FREE

人面铁颌战意浓，

唐宋遗甲血未空。

孤城落日悲歌起，

义体重生泪已穷。



The package contains a Chinese cyborg humanoid character.

You can use this asset in different kinds of action, shooter games, or any game that requires cool humanoid character.

The character's equipment includes a Chinese chest lamellar armor and ammo pouches. We also provide 5 different clothing texture sets for the character.

To achieve better rendering effects, the package also includes a pre-integrated subsurface scattering skin shader, a hair shader, and a physically-based eye refraction shader. You can adjust the color of the hair and the color of the eye pupil. These contents are only compatible with URP pipeline.

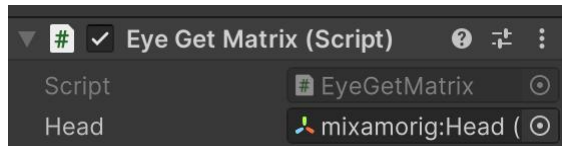
No AI/ML contents are included in this package.

Our character uses Unity's Mecanim system (humanoid rig) and is designed for animation re-targeting.

The package includes PBR textures (metallic workflow), and a curvature texture for skin, a SSS LUT texture for skin, a mask texture for skin shading, a mask texture for hair specular. Texture sizes are all 2048.

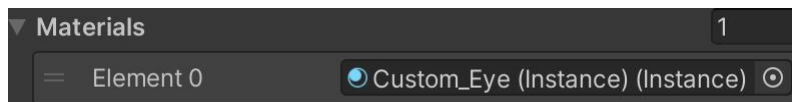
## How To Use the Eye Materials

The package contains a physically-based eye shader to achieve a better eye rendering effect by simulating the physical refraction of the human eyeballs. The shader and the linked hlsl file can be found in ChineseCyborgSoldier/ Shaders/ EyePBR.shader and ChineseCyborgSoldier/ Shaders/ EyeInclude.hlsl. To calculate the refraction, the shader needs some matrices and the scale parameters in the scene. Consequently, the script EyeGetMatrix.cs is attached to both of the eye meshes.



In the script, we calculate the refraction by coordination system of the bone that the eye meshes move with, namely, the head. The “Head” in the script must be set to the head transform of the character’s humanoid armature.

In your games, you may want many characters in one scene, each owning different matrices and scale parameters. To achieve this, the eye materials all should be instanced. The script already ensured this for you. However, instanced materials may entail you to drag the material to the mesh again after each update of the material parameters.



### How to customize eye colors

The eye materials are in ChineseCyborgSoldier/Materials/Eye. You can customize the color by adjusting the “Color” and “Pupil Color” properties. You can adjust the offset strength by adjusting “Offset Multiplier”. A larger value means a larger offset strength.

## How To Use the Skin Material

The skin shader implements the pre-integrated subsurface scattering to render a rosy skin. The skin material is stored in ChineseCyborgSoldier/ Materials/ Skin. The skin tends to manifest rosy red edges in areas with higher curvature. The rosiness is achieved by sampling the SSS\_LUT texture. You can also adjust the sharpness of the rosy edges by adjusting \_CurvaturePow.


## How To Use the Hair Material

When it comes to hair rendering, We need to achieve a Anisotropic specular effect for the hair. The Tangent Shift properties in the material decides the specular is shifted towards the root or shifted towards the tip. With a lower value, the specular shifts towards the root. With a higher value, the specular shifts towards the tip.

The HairSpecular properties decide the strength of the specular.

The HairSpecularPow determines the concentration of the specular.

You can change the hair color by adjusting the “Color” property.

Tangent Shift	<input type="range"/>	0.48
HairSpecular		0.12
HairSpecularPow		148.41
Tangent Shift 1	<input type="range"/>	-0.6
HairSpecular1		0.12
HairSpecularPow1		313.9
Albedo		
Tiling	X <input type="text" value="1"/> Y <input type="text" value="1"/>	
Offset	X <input type="text" value="0"/> Y <input type="text" value="0"/>	<input type="button" value="Select"/>
Color		<input type="color"/>