游戏项目实践 实践课15

- AR开发实践

1

注册AR开发库 Vuforia账户

https://developer.vuforia.com/

（当前网站账户注册有些问题）

AR开发库Vuforia

vuforia® engine™
developer portal

Home   Pricing   Downloads   Library   **Develop**   Su

License Manager   Target Manager   Credentials Manager
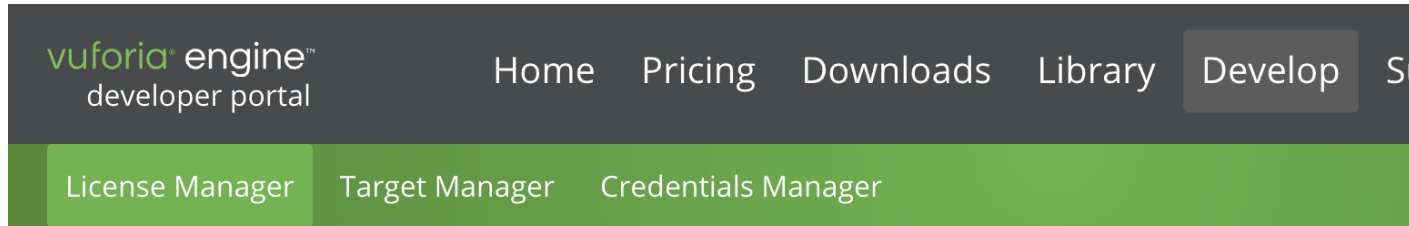
License Manager

Get Basic

Learn more about licensing.
Create a license key for your application.

Search

License Manager > Game014

Game014   Edit Name   Delete License Key

License Key   Usage

Please copy the license key below into your app

AROGg/T/////AAABmeaFgoQoyk/ygdMwdPIJ7odfDtH8ddV+uQjjeF9SziverFmP0iI1myHpdjtQVo/bo4Ws6ho8YSMGS+yRAjY3SwH
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练习**1-1**

1. **注册并登陆**

https://developer.vuforia.com/

2. License Manager

3. Get Basic

4. 创建

5. 复制License Key

2

Unity中使用 Vuforia库

Vuforia介绍：
https://assetstore.unity.com/packages/templates/packs/vuforia-core-samples-99026#content

Unity的版本建议2022.3以上

使用Vuforia

练习2-1
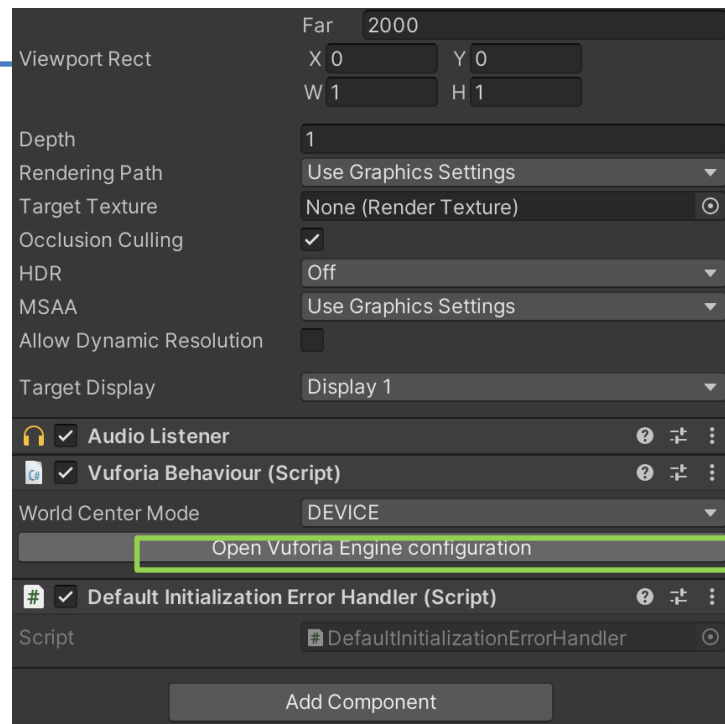
1. 导入15-Vuforia-package-10-19-3.unitypackage

   - 如果课程网站下载慢，可在[官网下载]

2. 创建ARCamera

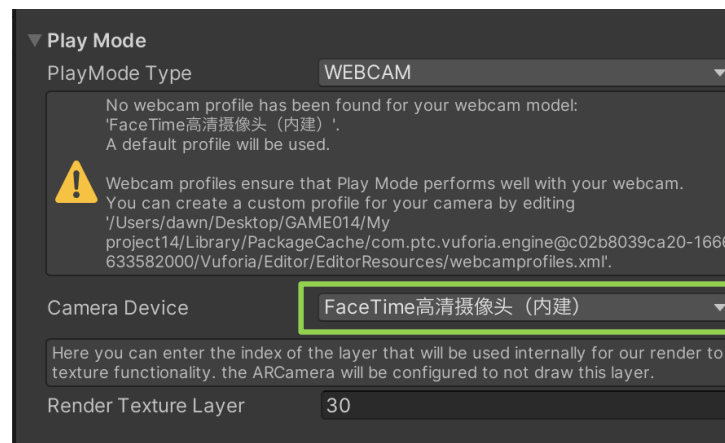   1. 打开Vuforia引擎设置

   2. 设置License Key

   3. 设置真实的摄像头（Camera Device）

	Far	2000
Viewport Rect	X 0	Y 0
	W 1	H 1
Depth	1	
Rendering Path	Use Graphics Settings	
Target Texture	None (Render Texture)	
Occlusion Culling	✓	
HDR	Off	
MSAA	Use Graphics Settings	
Allow Dynamic Resolution		
Target Display	Display 1	

✓ Audio Listener

✓ Vuforia Behaviour (Script)

World Center Mode   DEVICE

Open Vuforia Engine configuration

✓ Default Initialization Error Handler (Script)

Script   DefaultInitializationErrorHandler

Add Component

打开Vuforia引擎设置

设置License Key

Play Mode

PlayMode Type   WEBCAM

⚠ No webcam profile has been found for your webcam model:
'FaceTime高清摄像头（内建）'.
A default profile will be used.

Webcam profiles ensure that Play Mode performs well with your webcam.
You can create a custom profile for your camera by editing
'/Users/dawn/Desktop/GAME014/My
project14/Library/PackageCache/com.ptc.vuforia.engine@c02b8039ca20-1666
633582000/Vuforia/Editor/EditorResources/webcamprofiles.xml'.

Camera Device   FaceTime高清摄像头（内建）

Here you can enter the index of the layer that will be used internally for our render to texture functionality. the ARCamera will be configured to not draw this layer.

Render Texture Layer   30

设置摄像头

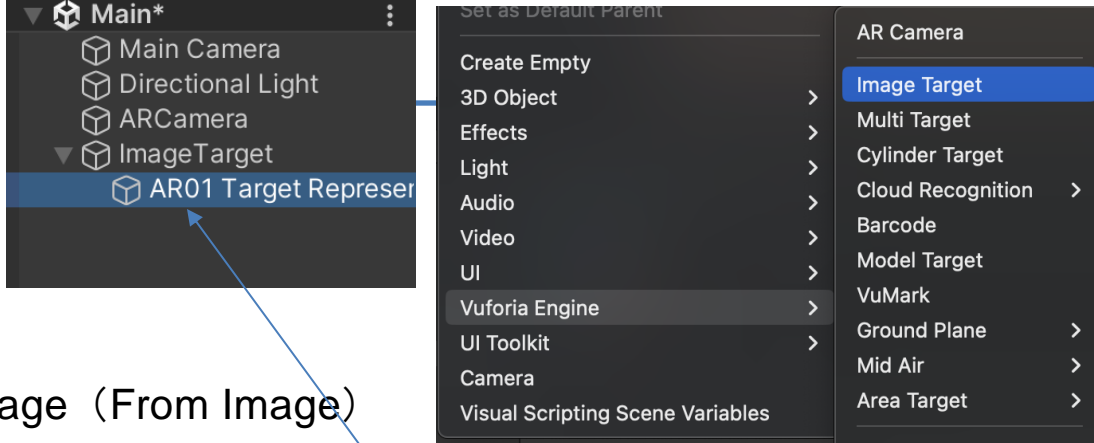# 使用Vuforia
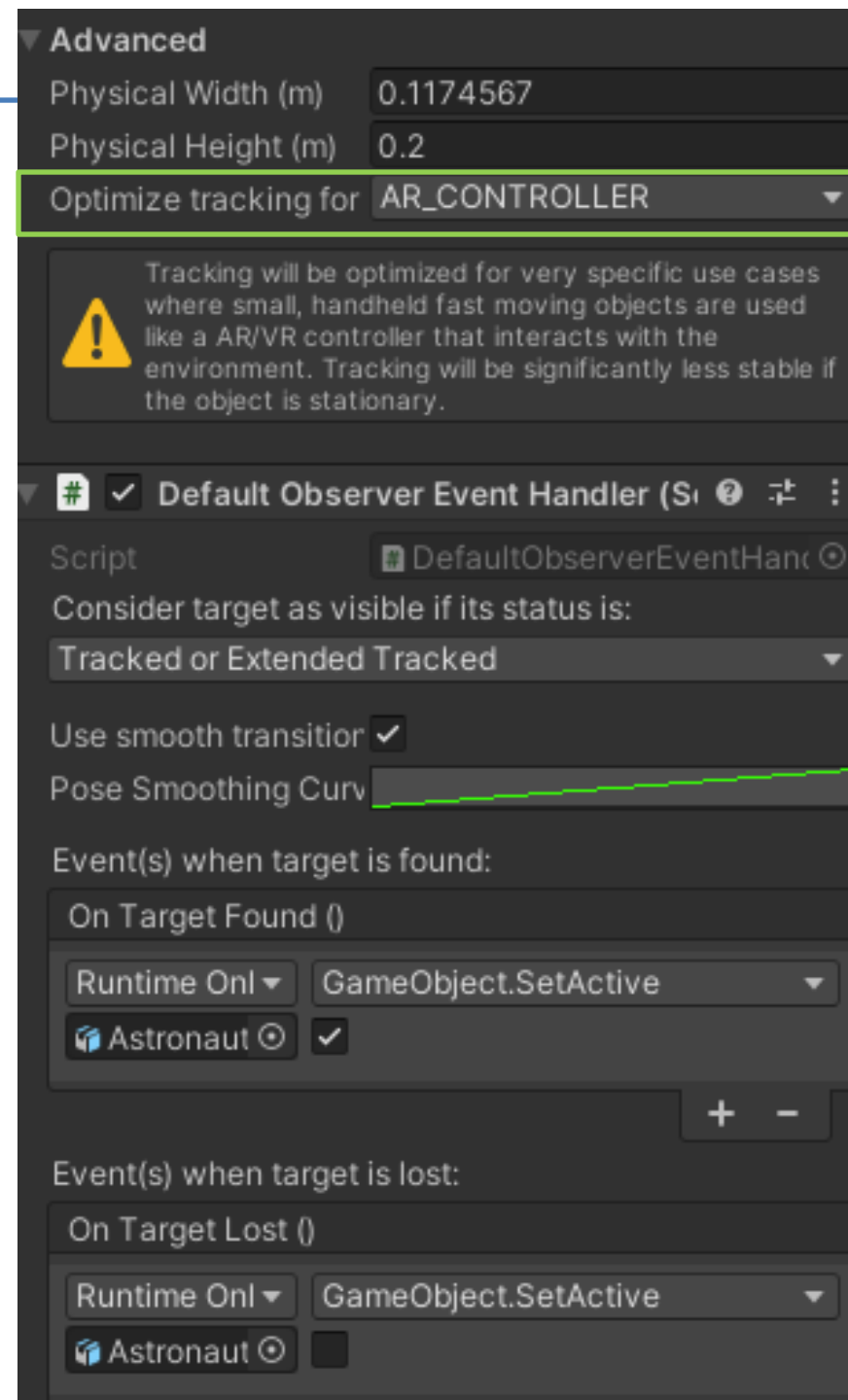
练习2-1

3. 创建Image Target

   1. 选择一张Image（From Image）

   2. Add Target Representation

   3. ImageTarget下会多一个Target Representation

   4. 为Target Representation选择一个Mesh模型

   5. 事件设置（可选）

     • On Target Found（跟踪到触发）

     • On Target Lost （目标丢失后触发）

4. 设置优化的跟踪模式（针对跟踪不准确的问题）

   • 将Image Target中的Advanced的Optimize tracking for修改为 AR_CONTROLLER，可提高跟踪的精度

创建ImageTarget

使用Vuforia

练习**2-1**

测试用**KEY**

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K2YI3dhslqplU

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G1OFxDBsdfw7cyk1E3KLiLBXuJljsC4B/Bn6dxFJe+Fc5FbPfCx9cqI5tNXah0LR2Uyz8rcxSNYAxbHb71I8hovyzhgKftGvMB/8gp1eDhMrs9Y3Rp8aer0V+SQNvQT

4t4qNacidHkHrEKyVnAixwB964JD9sSnnpvHFEW85fvGXAsGJP7FCysuNoMX7KCiwtMxJiFMW+IuJHJxM/u7OJNMQzvP62SX3Kd1va5YvxIQftZ4PQSE0/qDHvF

OeoWb

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L5ZTwHPlrEgDorEFqQRl8tZOW1tDfy5DTdOaqXQA/NVqVDizs2WD6//0xO6WK/q+qBd9SlbVPU9CvpPZyGUcGnfwy+mWy9dbKQZyllKKY6nNBmklYbiPEqNbAy

bploceSK45elkicFQoVrvUMLlaDY8Zvfm9274qTOSYOOP388lNFi1XWzLZqgLplTP3dwilio0Fc0Jkw7umcV/z1daocG3TMxkfC88obYX4dugizD5wJs8sFFO6sTCA/

x1G

要求1:

- 当摄像头里出现卡片 的内容，卡片上显示该模型（AugmentationAssets/Models/Astronaut.FBX）

- 调整模型的材质、大小和位置

- 模型随卡片移动而移动
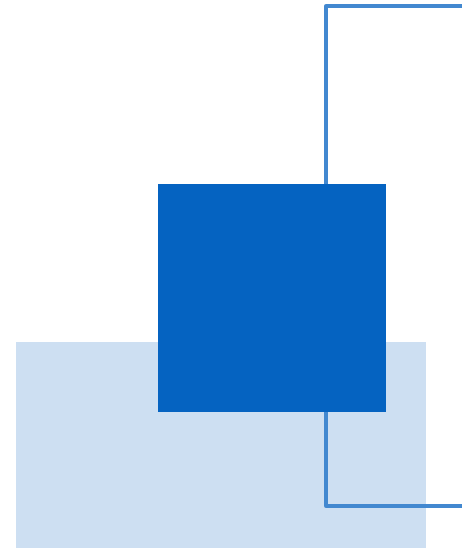
要求2:

- 当摄像头里出现卡片 的内容，卡片上显示该模型的动画效果，调整模型的材质、大小和位置

    - 模型文件：AugmentationAssets/Models/Drone.FBX

    - 动画文件： AugmentationAssets/Animations/Drone.controller

- 模型动画随卡片移动而移动

3

在手机上
进行交互

（课后选做）

练习3-1

导入15-SimpleInput.unitypackage

- 新建场景

- 创建UI，生成Canvas

- 添加Prefabs/Joystick.prefab到Canvas对象里

- 添加一个Button，并选择合适的Sprite

- Joystick用于控制物体的移动

  - 可获得Joystick的偏移数据驱动物体移动

- Button可用于控制物体的事件，例如开火

Q&A