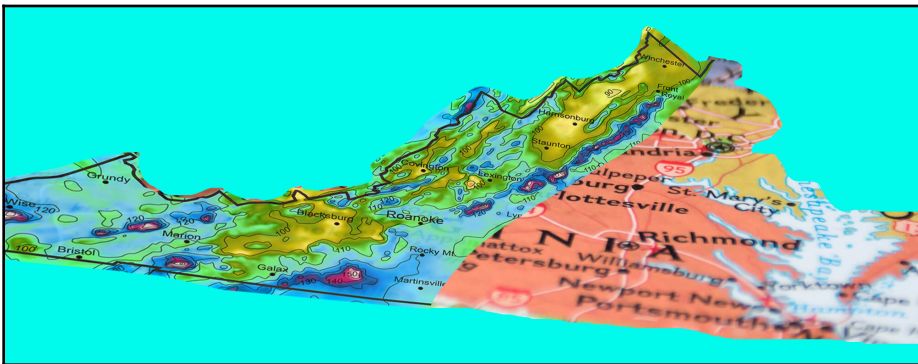
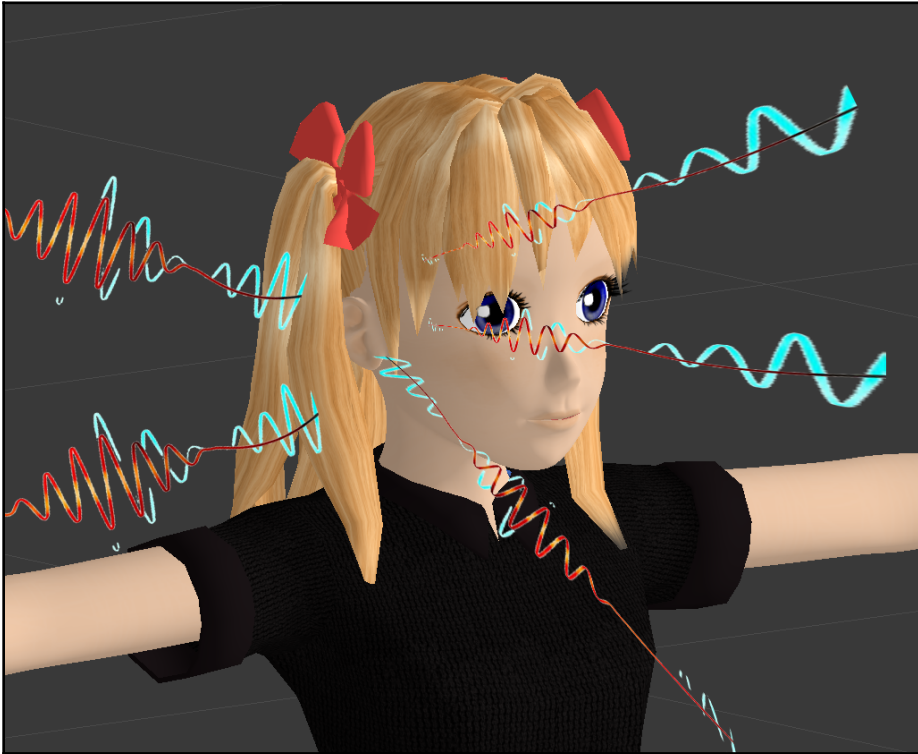
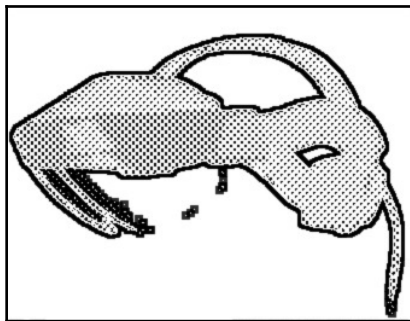
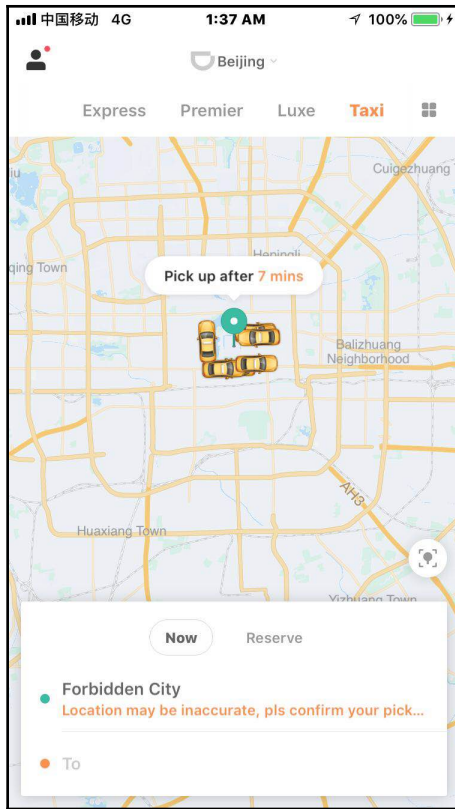
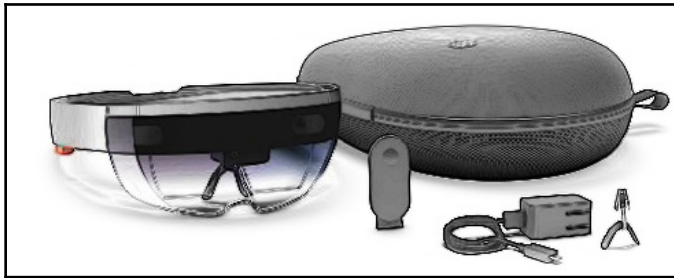
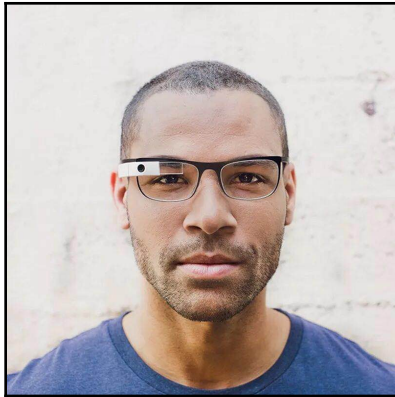


# Chapter 1: What AR is and How to Get Set up











# Register for a Vuforia Developer Account

With an account you can download development tools, get license keys, and participate in the Vuforia community.



By creating an account you agree to the [Vuforia Developer Agreement](#).

[Back To License Manager](#)

## Add a free Development License Key

### App Name

You can change this later

### License Key

Develop

Price: No Charge

Reco Usage: 1,000 per month

Cloud Targets: 1,000

VuMark Templates: 1 active

VuMarks: 100

By checking this box, I acknowledge that this license key is subject to the terms and conditions of the [Vuforia Developer Agreement](#).

Cancel

Confirm



License Manager > VuforiaIntro

## VuforiaIntro

[Edit Name](#) [Delete License Key](#)

License Key

[Usage](#)

Please copy the license key below into your app

```
AYqHzMX/////AAAAGQ9oDVTdl0gzgKed6AnYkOV/PoutQrL5qDQ9
dcfNNrNVhdbxCxofVuNM3Z1F5y2FfWTsm2WyX/vbldZvfrVy3z7d
1104tLgJ69U77B9iGpRSR4tFzQd+d3aX/cBtyjJ8SW1+fIUovSrx
UbVv2Kz0DkHaCKcjbsoHLnFdPoSbtQVisfWSTatZ8Qpe6zPexAWH
IhZtTnWpatsxtVVBtGLg1tWU1LTW/xRgV3qgserhwbhB98h2J7XU
yfSu8UiPVu8Nek5ipRzAQY519CDLUYqrEC7khYrgHdIjIIsaQwEQE
Jokwww6q2XxCUoGiRWjsYczjskxZW9rsjliLVa3+Bvn8U+CW3V6x
7wvaNW0Ch/XFDvCc
```

**Type:** Develop

**Status:** Active

**Created:** Dec 09, 2017 08:49

**History:**

License Created - Dec 09, 2017 08:49



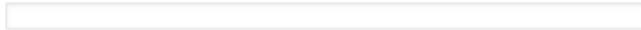
# VuforiaIntro

[Edit Name](#) [Delete License Key](#)

[License Key](#)

**Usage**

## Cloud Recos



0 of 1,000 (0%)

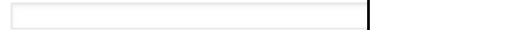
Cloud Databases: None

License Type: Develop

Reco Usage: 1,000 per month

Cloud Targets: 0 of 1,000

## VuMarks generated



0 of 100 (0%)

VuMark Databases: None

VuMark Templates: 1 active

VuMarks: 100

[Statement History](#)

Last updated: Today 13:16

All Unity plans are **royalty-free** and include **All Platforms Free, Core Engine Features, Continuous Updates, and Beta Access.**

## Personal

### Free

For beginners, students and hobbyists who want to explore and get started with Unity.

[Try Personal](#)

[Learn More](#)

- All core engine features

## Plus Best Seller

### \$35 per month

For creators who are serious about bringing their vision to life and plan to publish.

[Get Plus](#)

[Learn More](#)

**Now included:**

- Unity Game Dev Courses + Bolt Visual Scripting Tool (\$214 value)
- 20% off Asset Store subscriber benefit

[View offer](#)

- Customizable Splash Screen
- Performance Reporting
- Extended Unity Analytics
- Flexible Seat Management
- Pro Skin Editor UI
- Plan eligibility: annual revenue or funds raised of \$200k or less

## Pro

### \$125 per month

For professionals who need complete flexibility and crave advanced customization.

[Go Pro](#)

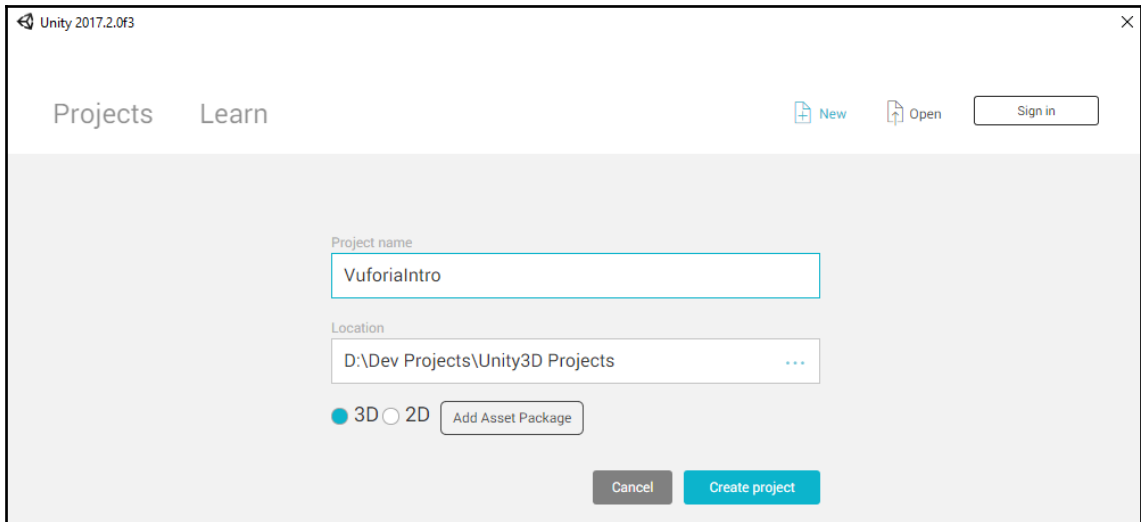
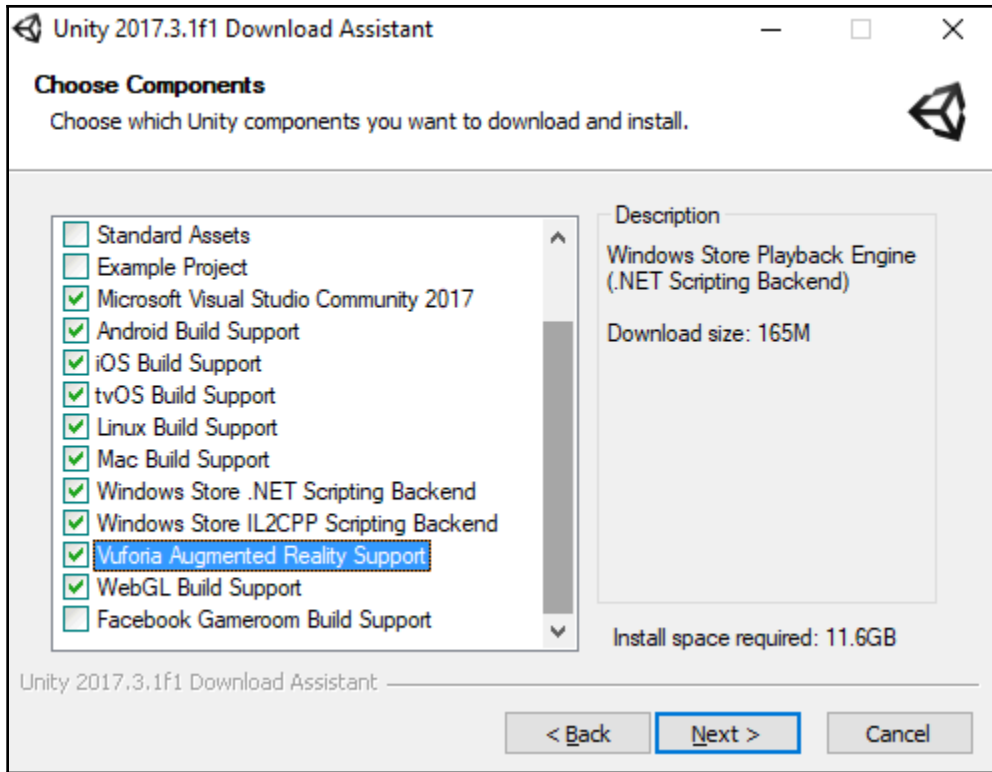
[Learn More](#)

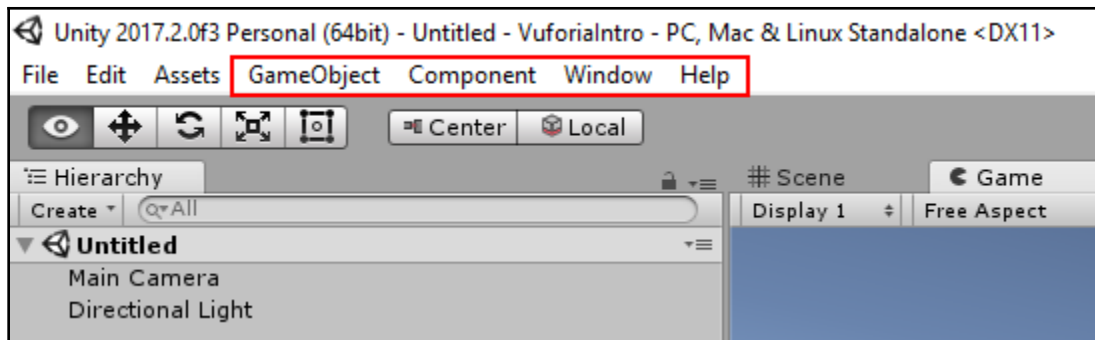
**Now included:**

- 20% off Asset Store subscriber benefit
- Pro level services

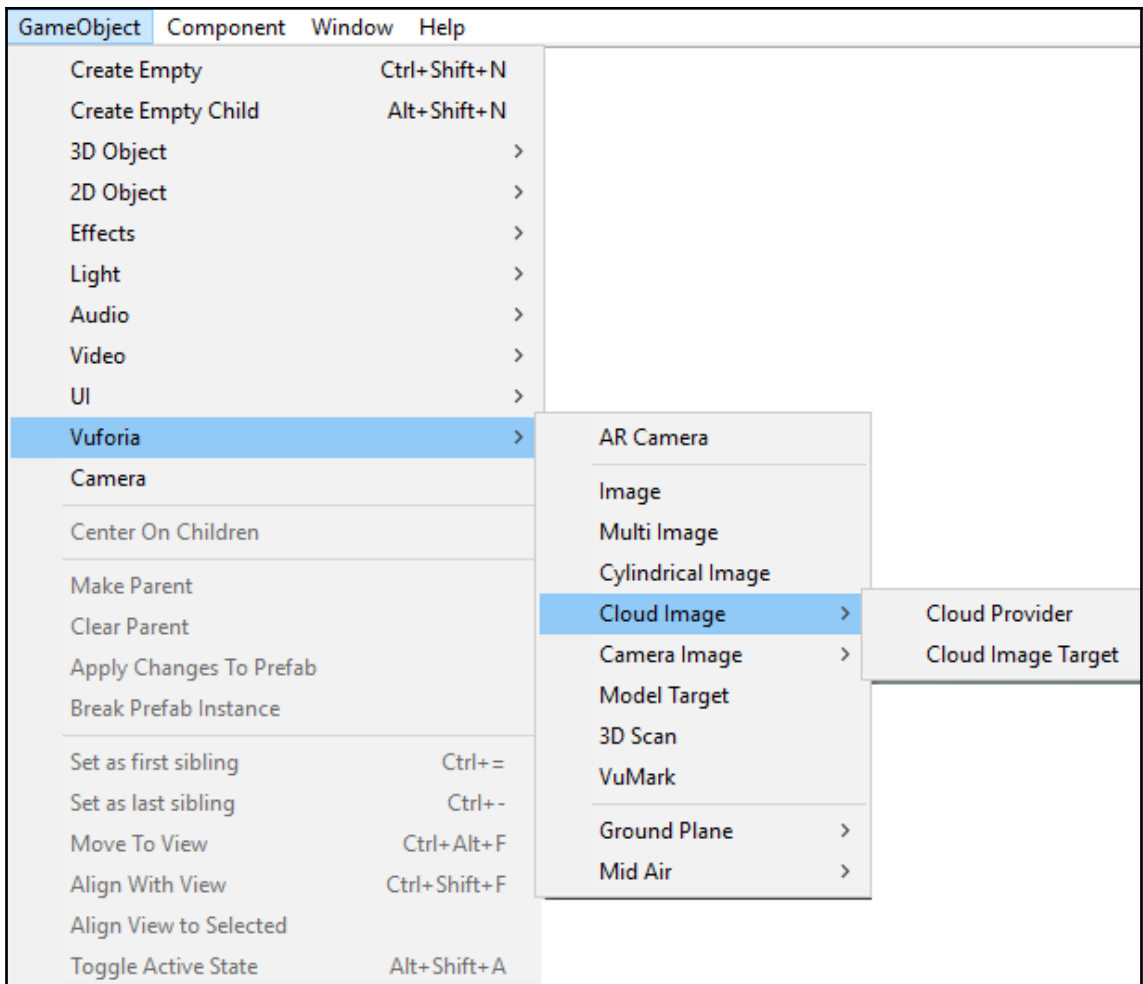
- All the features of Plus
- Premium support and source code access plans available
- Plan eligibility: no limits on revenue or funding

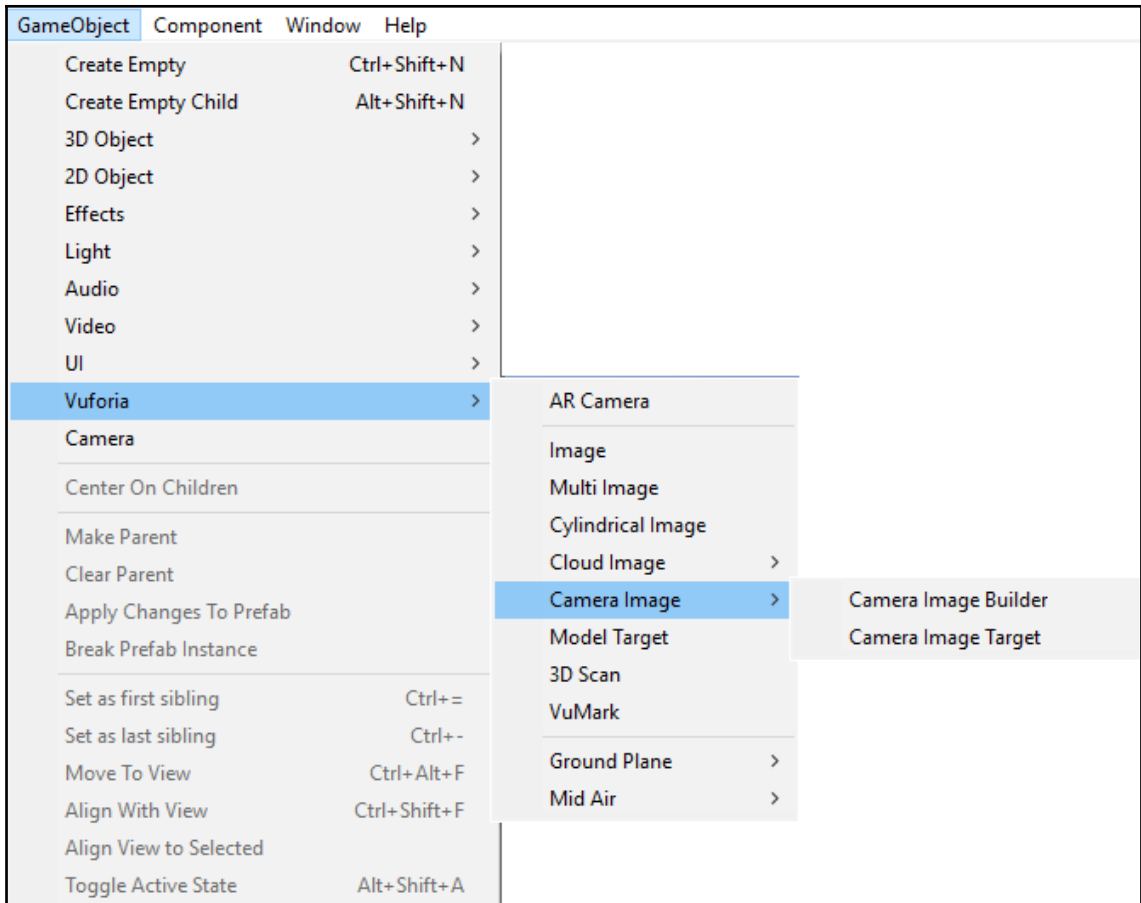






GameObject	Component	Window	Help
	Create Empty		Ctrl+Shift+N
	Create Empty Child		Alt+Shift+N
	3D Object		>
	2D Object		>
	Effects		>
	Light		>
	Audio		>
	Video		>
	UI		>
	<b>Vuforia</b>		>
	Camera		
	Center On Children		
	Make Parent		
	Clear Parent		
	Apply Changes To Prefab		
	Break Prefab Instance		
	Set as first sibling		Ctrl+=
	Set as last sibling		Ctrl+-
	Move To View		Ctrl+Alt+F
	Align With View		Ctrl+Shift+F
	Align View to Selected		
	Toggle Active State		Alt+Shift+A
		AR Camera	
		Image	
		Multi Image	
		Cylindrical Image	
		Cloud Image	>
		Camera Image	>
		Model Target	
		3D Scan	
		VuMark	
		Ground Plane	>
		Mid Air	>







**Inspector**

ARCamera  Static


Tag Untagged Layer Default

**Transform**

Position	X 0	Y 0	Z 0
Rotation	X 0	Y 0	Z 0
Scale	X 1	Y 1	Z 1

**Camera**

Clear Flags Solid Color

Background 

Culling Mask Everything

Projection Perspective

Field of View

Clipping Planes Near 0.05 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

Allow HDR


Allow MSAA

Allow Dynamic Resolution

Target Display Display 1

**Audio Listener**

**Vuforia Behaviour (Script)**

 Vuforia is not enabled. Enable Vuforia in the PlayerSettings in order to modify this object.

[Download new Vuforia version: 7.2.23](#)

World Center Mode FIRST\_TARGET

**Default Initialization Error Handler (Script)**

Script DefaultInitializationErrorHandler


Component	Window	Help
Add...		Ctrl+Shift+A
Mesh		>
Effects		>
Physics		>
Physics 2D		>
Navigation		>
Audio		>
Video		>
Rendering		>
Tilemap		>
Layout		>
Playables		>
AR		>
Miscellaneous		>
Analytics		>
Scripts		>
Event		>
Network		>
XR		>
UI		>

Component	Window	Help
Add...	Ctrl+ Shift+A	
Mesh	>	
Effects	>	
Physics	>	
Physics 2D	>	
Navigation	>	
Audio	>	
Video	>	
Rendering	>	
Tilemap	>	
Layout	>	
Playables	>	
AR	>	
Miscellaneous	>	
Analytics	>	
Scripts	>	UnityEngine.EventSystems >
Event	>	Vuforia >
Network	>	Default Initialization Error Handler
XR	>	Default Initialization Error Handler Internal
UI	>	Default Initialization Error Handler Place Holder
		Default Trackable Behaviour Placeholder
		Default Trackable Event Handler
		Vuforia Mono Behaviour
		Anchor Behaviour
		Anchor Input Listener Behaviour
		Anchor Stage Behaviour
		Background Plane Behaviour
		Cloud Reco Behaviour
		Content Positioning Behaviour
		Cylinder Target Behaviour
		GL Error Handler
		Guide View 2D Behaviour
		Guide View 3D Behaviour
		Guide View Camera Behaviour
		Guide View Rendering Behaviour
		Image Target Behaviour
		Mask Out Behaviour
		Mid Air Positioner Behaviour
		Model Target Behaviour
		Multi Target Behaviour
		Object Target Behaviour
		Plane Finder Behaviour
		Preview Model Turn Off Behaviour
		Turn Off Behaviour
		User Defined Target Building Behaviour
		Video Background Behaviour
		Virtual Button Behaviour
		Vuforia Behaviour
		Vu Mark Behaviour
		Wireframe Behaviour
		Wireframe Trackable Event Handler

**Inspector** VuforiaConfiguration Open

**Global**

Vuforia Version 7.1.31

 A new version of Vuforia is available: 7.2.23  
Upgrade for App Store submission fixes, additional ARCore supported devices, and improvements to Model Targets tracking.

[Download Vuforia 7.2.23](#)  
[Learn More](#)

**App License Key**  Add License

Delayed Initialization

Camera Device Mode MODE\_DEFAULT

Max Simultaneous Tracked Images 1

Max Simultaneous Tracked Objects 1

Load Object Targets on Detection


Camera Direction CAMERA\_DEFAULT

Mirror Video Background DEFAULT

**Digital Eyewear**

Device Type Handheld

**Databases**

 Databases will be automatically loaded and activated if its TrackingBehaviour is enabled on scene load.

VuforiaMars\_Images  
VuforiaMars\_ModelTarget  
VuforiaMars\_Object\_OT  
VuforiaMars\_VuMark

Add Database

**Video Background**

Enable video background

Video Background Shader Hidden/VR/VideoBackground

Number Divisions 2


Overflow geometry CLIP


Matte Shader Hidden/VR/ClippingMask

**Device Tracker**

**Webcam**

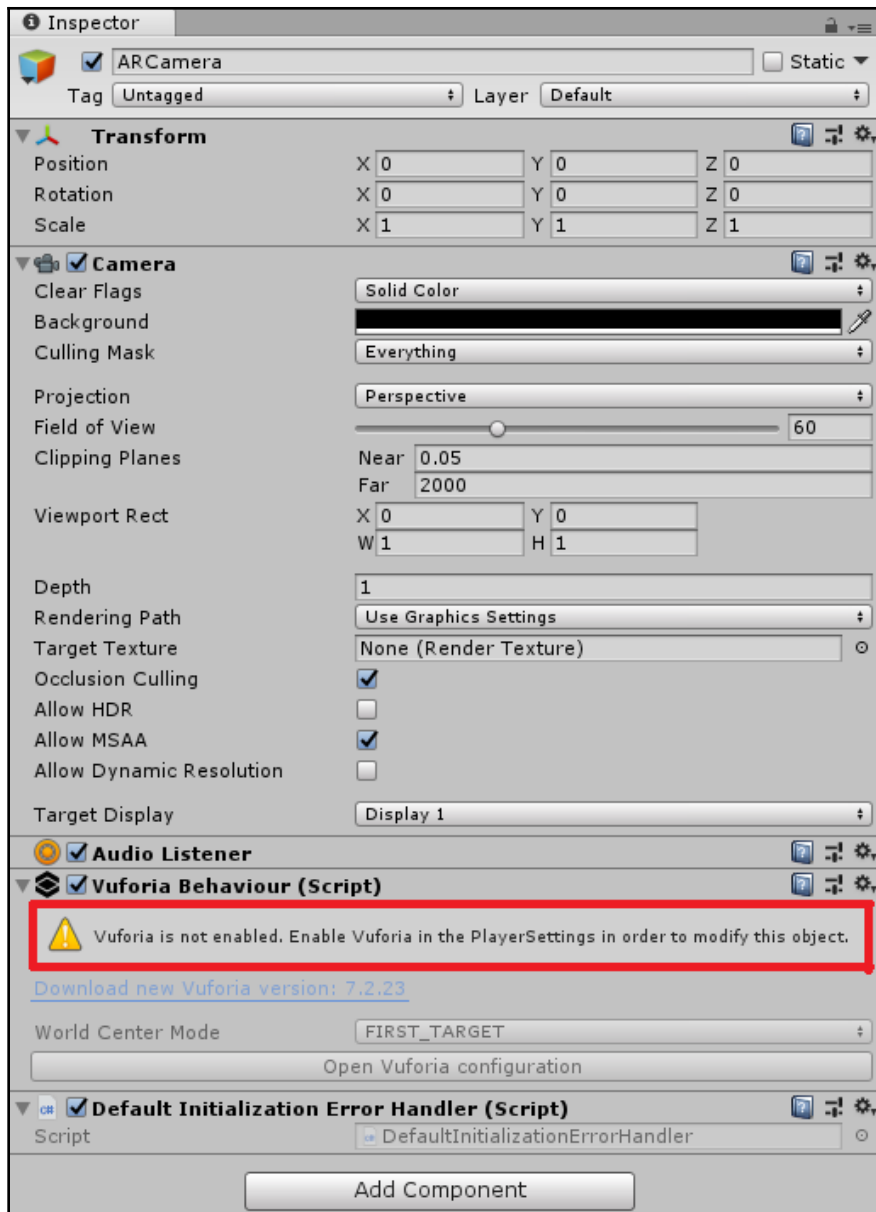
Disable Vuforia Play Mode

 No webcam profile has been found for your webcam model: 'USB2.0 PC CAMERA'.  
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 'C:/Program Files/Unity/Editor/Data/PlaybackEngines/VuforiaSupport/VuforiaResources/webcamprofiles.xml'.

Camera Device USB2.0 PC CAMERA

Flip Horizontally





**Inspector Services**

hdbxCxofVuNM3Z1F5v2FfWTsm2Wv

Add License

Delayed Initialization

Camera Device Mod MODE\_DEFAULT

Max Simultaneous Tr 1

Max Simultaneous Tr 1

Load Object Targets

Camera Direction CAMERA\_DEFAULT

Mirror Video Backgr DEFAULT

**Digital Eyewear**

Device Type Handheld

**Databases**

Load VuforiaMars\_In   
Activate

Load VuforiaMars\_M

Load VuforiaMars\_OI   
Activate

Load VuforiaMars\_Vt   
Activate

Add Database

**Video Background**

**Device Tracker**

Track Device Pose

**Webcam**

Disable Vuforia Play

No webcam profile has been found for your webcam model: 'AVerMedia HD Capture C985 Bus 2'. A default profile will be used.

**Warning:** Webcam profiles ensure that Play Mode performs well with your webcam. You can create a custom profile for your camera by editing 'D:/Dev Projects/Unity3D Projects/VuforiaIntro/Assets/Editor/QCAR/WebcamProfiles/profiles.xml'.

Camera Device AVerMedia HD Capture C985 Bus 2

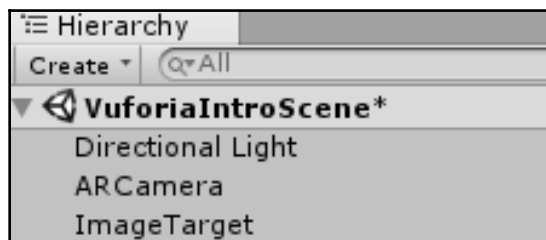
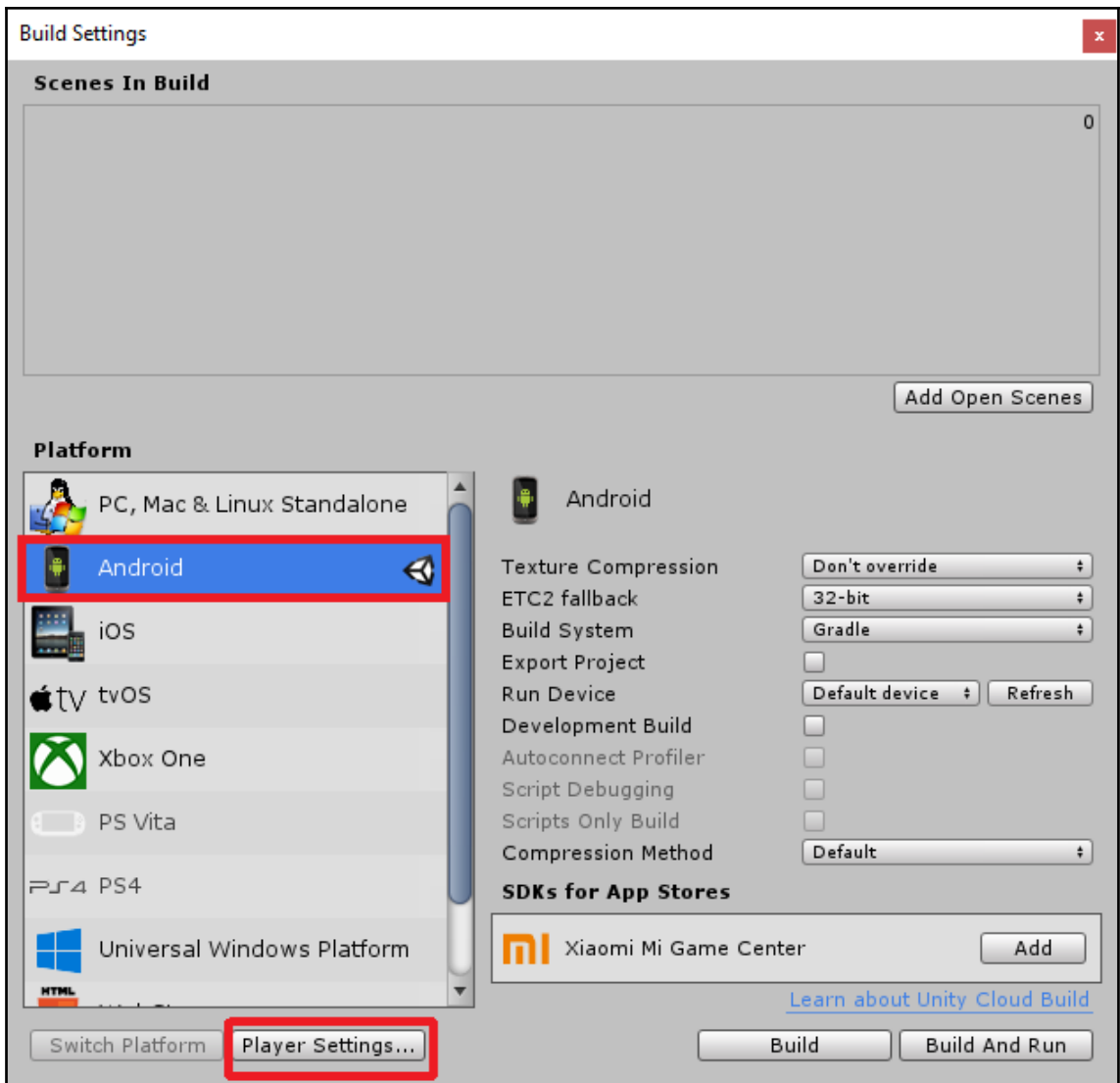
Flip Horizontally

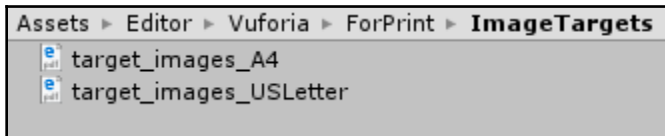
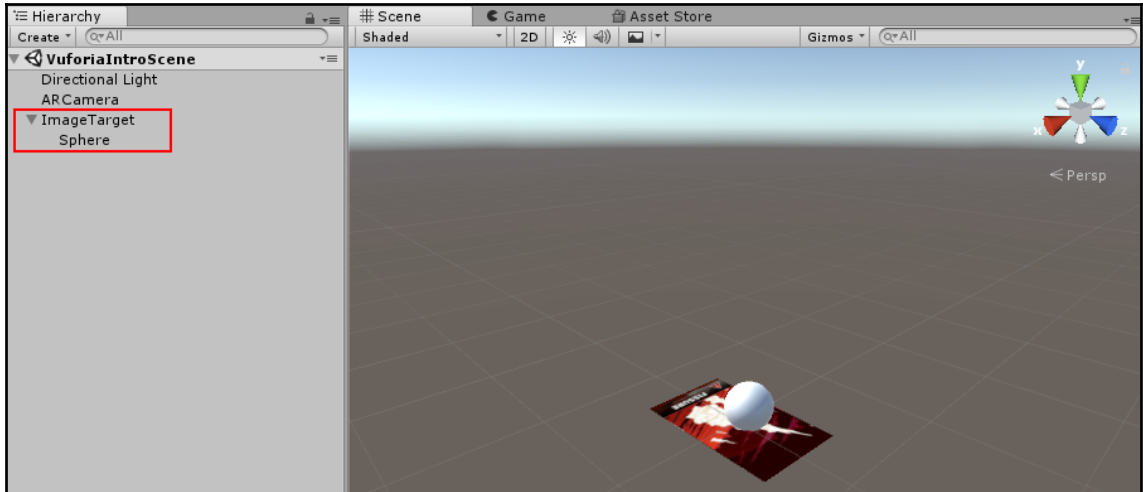
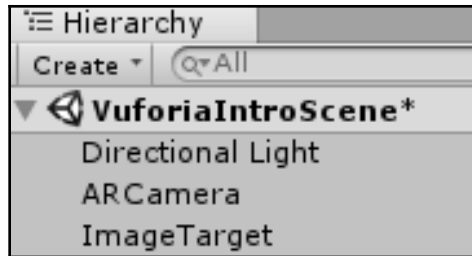
Here you can enter the index of the layer that will be used internally for our render to texture functionality, the ARCamera will be configured to not draw this layer.

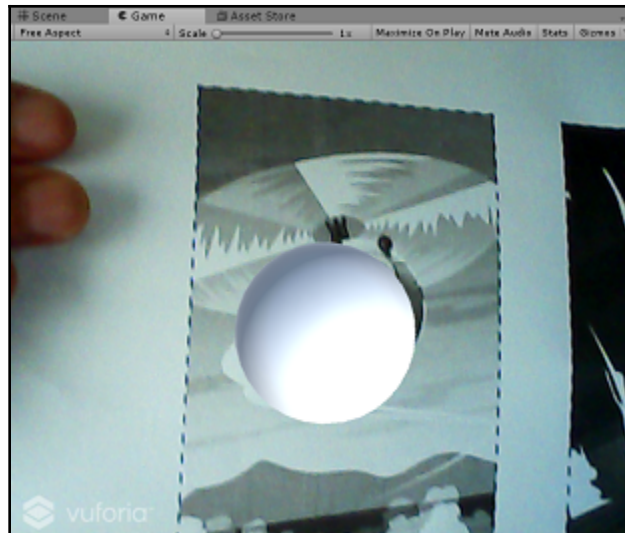
Render Texture Layer 30

**Asset Labels**

AssetBundle None None







## DOWNLOAD SDK

# Download ARToolKit SDKs

ARToolKit has compiled SDKs for Windows, Mac OS, Linux, iOS and Android all ready to download and use. We're eager to see what you'll build with our free and open source software for augmented reality.

[About ARToolKit](#)[Blog](#)[Community Forums](#)[Documentation](#)[Licensing Information](#)[Looking for ARToolKit for Unity?](#)[Want to contribute to the codebase? Fork us on GitHub.](#)

## ARToolKit SDK


### Latest Release: ARToolKit v5.3.2

[View Changelog on GitHub.](#)

# Using Unity?

The latest ARToolkit for Unity package includes a full project and examples source, plus binaries for plugins and utilities. Plugins and utilities sources are in the ARToolkit packages.

Latest Version: 5.3.2

 **DOWNLOAD UNITY PACKAGE**

**DOWNLOAD ADDITIONAL UNITY TOOLS** ▼

[See Packages for Previous Unity Versions](#)

Unity 2018.1.0f2

Projects Learn New Open My Account

Project name: ARToolkitIntro

Template: 3D

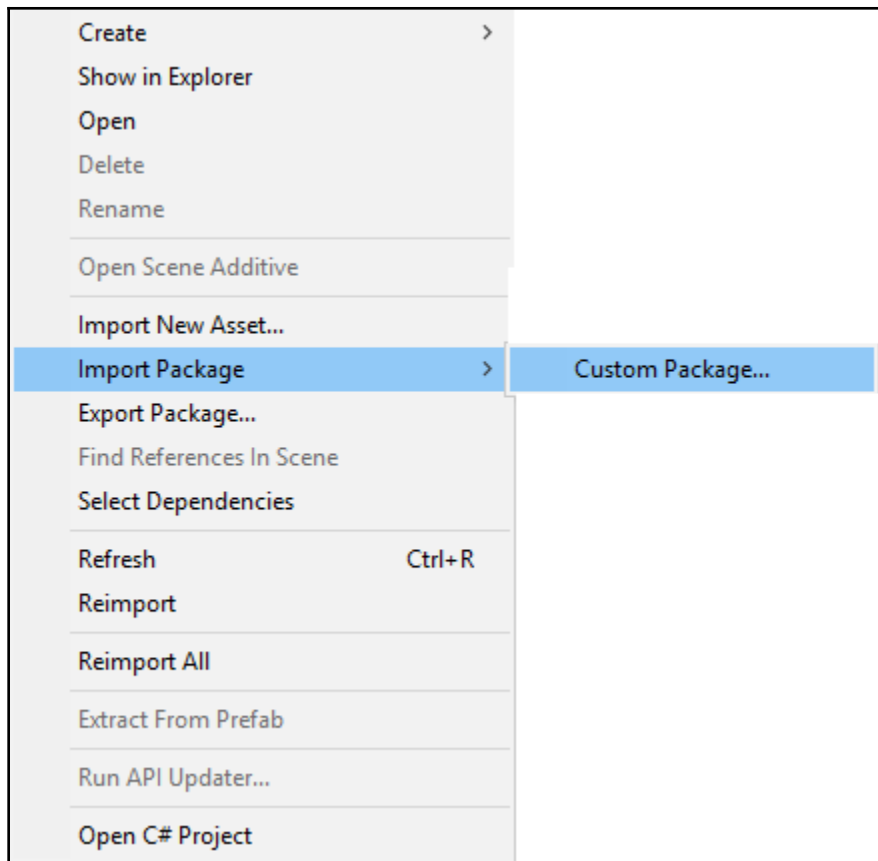
Location: D:\Dev Projects

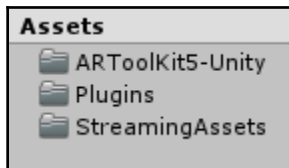
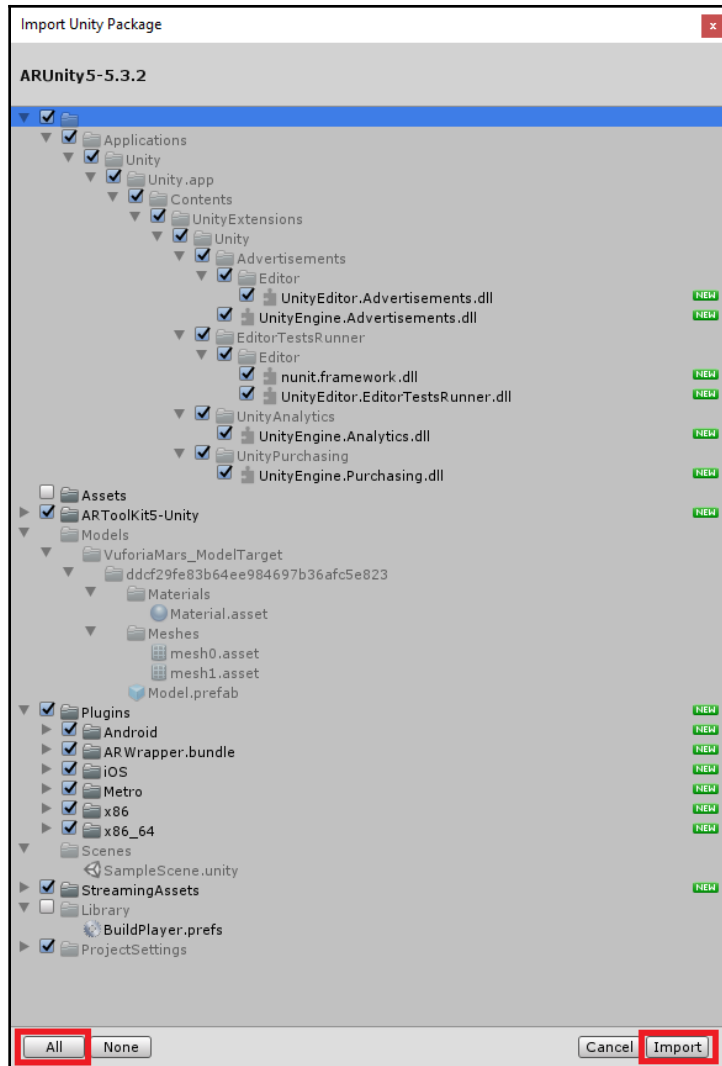
Add Asset Package

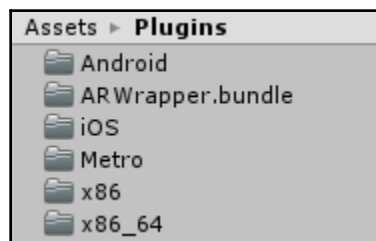
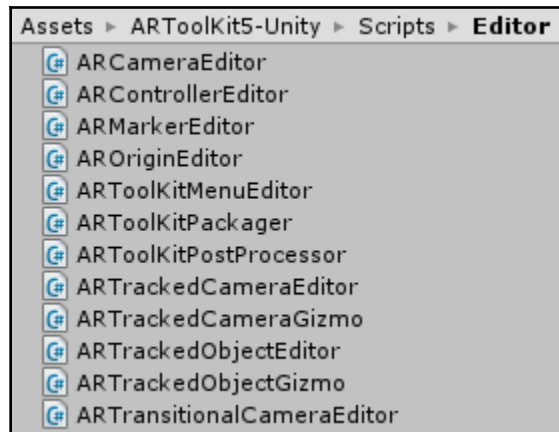
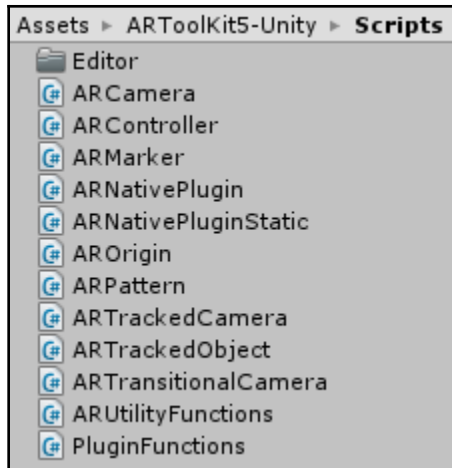
OFF Enable Unity Analytics ?

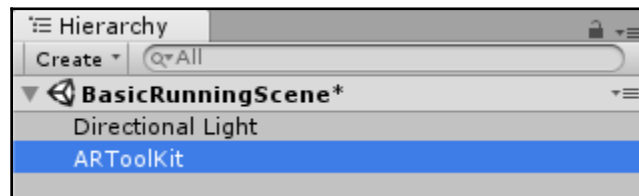
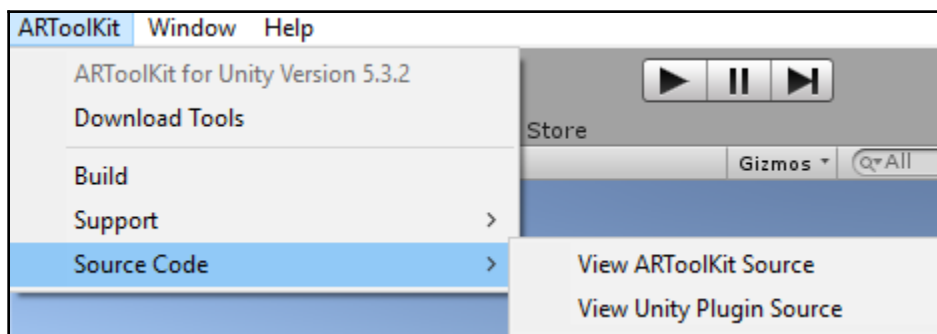
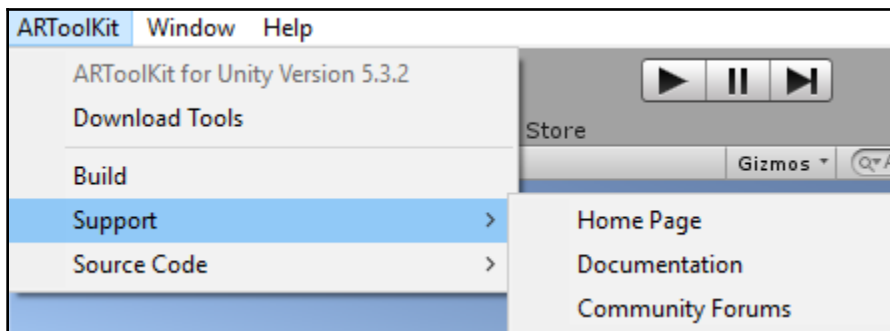
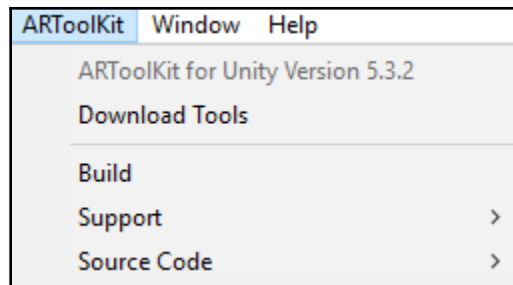
Cancel Create project











Inspector Services

Tags & Layers

Open

- ▶ Tags
- ▶ Sorting Layers
- ▼ Layers

Builtin Layer 0	Default
Builtin Layer 1	TransparentFX
Builtin Layer 2	Ignore Raycast
Builtin Layer 3	
Builtin Layer 4	Water
Builtin Layer 5	UI
Builtin Layer 6	
Builtin Layer 7	
User Layer 8	AR background
User Layer 9	AR background 2
User Layer 10	AR foreground
User Layer 11	
User Layer 12	
User Layer 13	
User Layer 14	
User Layer 15	
User Layer 16	
User Layer 17	
User Layer 18	
User Layer 19	
User Layer 20	
User Layer 21	
User Layer 22	
User Layer 23	
User Layer 24	
User Layer 25	
User Layer 26	
User Layer 27	
User Layer 28	
User Layer 29	
User Layer 30	
User Layer 31	

Inspector Services

ARToolkit  Static

Tag Untagged Layer Default

**Transform**

Position X 0.105 Y 0.10499 Z 0.40524

Rotation X 0 Y 0 Z 0

Scale X 1 Y 1 Z 1

**AR Controller (Script)** Version ARToolkit 5.3.2

**Video Options**

Camera parameters camera\_para

Video config. (Windows) <?xml version="1.0" en

Video config. (Mac OS) -width=640 -height=48

Video config. (iOS)

Video config. (Android)

Video config. (Windows) -device=WinMC -forma

Video config. (Linux)

Layer AR background

Video source is stereo

Use native GL textures

Allow non-RGB video

Content mode Fit

Rotate 90 deg.

Flip vertically

Flip horizontally

Near plane 0.01

Far plane 5

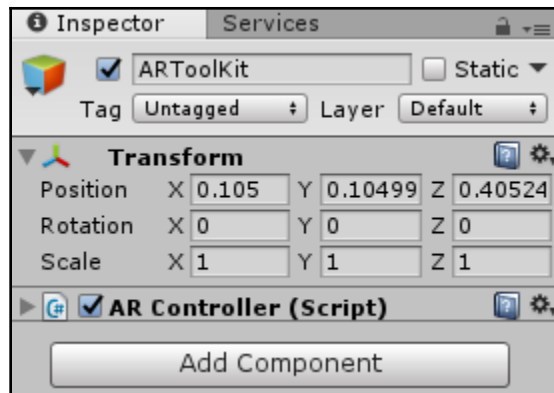
▶ Threshold Options

▶ Square Tracking Options

▶ NFT Tracking Options

▶ Application Options

Add Component



## Setting up your development environment

- Install the Android SDK version 7.0 (API Level 24) or higher.
  - To install the Android SDK, install [Android Studio](#).
  - To update the Android SDK, use the [Android SDK Manager](#) tool in Android Studio.
- Install [Unity 2017.3.0f2](#) or higher, with the **Android Build Support** component. For more info, see [Downloading and Installing Unity](#).
- You will need to get the ARCore SDK for Unity. You can either:
  - Download the [SDK for Unity](#) and extract it.
  - or-
  - Clone the repository with the following command:

```
$ git clone https://github.com/google-ar/arcore-unity-sdk.git
```

- You will need a [supported Android device](#).

Projects Learn

New

Open

Sign in

Project name

ARCoreTutorial

Location

C:\Users\jglov\Desktop ...

3D  2D

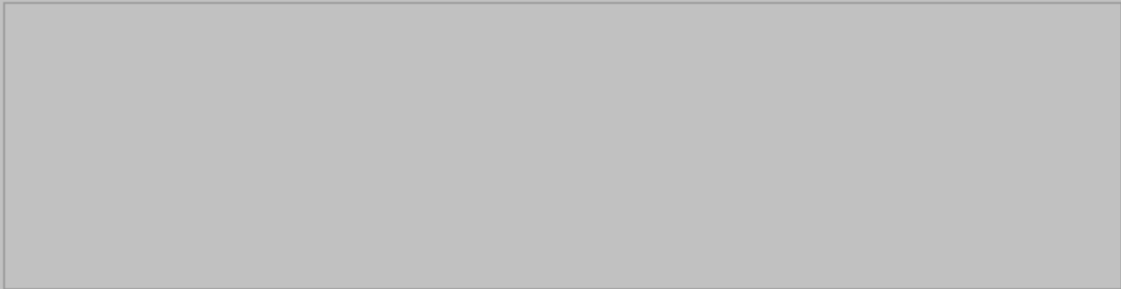
Add Asset Package

Create project



Build Settings

Scenes In Build



Add Open Scenes

Platform

- PC, Mac & Linux Standalone
- Android**
- WebGL
- iOS
- tvOS
- Xbox One
- PS Vita
- PS4

Android

- Texture Compression: Don't override
- ETC2 fallback: 32-bit
- Build System: Gradle
- Export Project:
- Development Build:
- Autoconnect Profiler:
- Script Debugging:
- Scripts Only Build:
- Compression Method: Default

SDKs for App Stores

Xiaomi Mi Game Center Add

[Learn about Unity Cloud Build](#)

Switch Platform

Player Settings...

Build

Build And Run

**Other Settings**

**Rendering**

Color Space\* Gamma

Auto Graphics API

Multithreaded Rendering\*

Static Batching

Dynamic Batching

GPU Skinning\*

Graphics Jobs (Experimental)\*

[Virtual Reality moved to XR Settings](#)

Protect Graphics Memory

**Identification**

Package Name com.Company.ProductName

Version\* 1.0

Bundle Version Code 1

Minimum API Level Android 7.0 'Nougat' (API level 24)

Target API Level Android 7.1 'Nougat' (API level 25)

**XR Settings**

Virtual Reality Supported

ARCore Supported

Vuforia Augmented Reality Supp

Import Unity Package

**arcore-unity-sdk-preview**

- GoogleARCore NEW
- Configurations NEW
- HelloARExample NEW
- Prefabs NEW
- SDK NEW

All None Cancel Import

# Scene   Game   Asset Store

RPDev.Jesco

All Assets   Type here to search assets



UNITY TECHNOLOGIES

### Unity ARKit Plugin

FREE

★★★★☆ 55 user reviews

[Download](#)

**Popular Tags**

Add a new tag right now?

[Add tags](#)

This is an *experimental* native plugin that enables using all the functionality of the *ARKit SDK* simply within your Unity projects for iOS. The plugin exposes *ARKit SDK*'s world tracking capabilities, rendering the camera video input, plane detection and update, point cloud extraction, light estimation, and hit testing API to Unity developers for their AR projects. This plugin is a preview quality build that should help to get you up and running quickly with this

Feedback

Unity Technologies / Unity / Unity-ARKit-Plugin

## Overview

[Download](#)   HTTPS   <https://bitbucket.org/Unity-Technologi>

Last updated 2018-03-07 Access level Read	5 Open PRs	168 Watchers
	19 Branches	47 Forks

Project name

ARKitTutorial

Unity Version

2018.1.6f1 - preferred

Location

D:\Dev Projects ...

Template

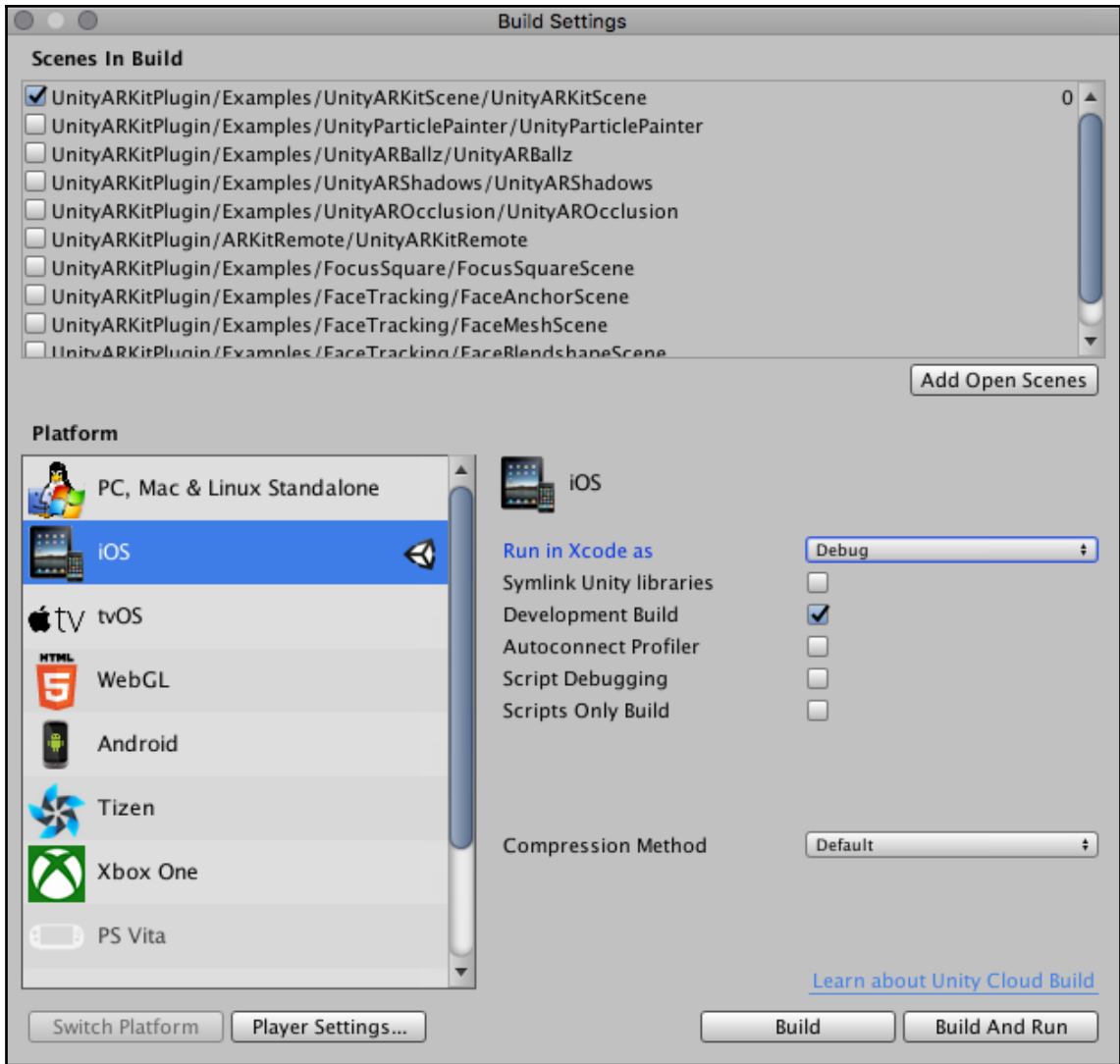
3D

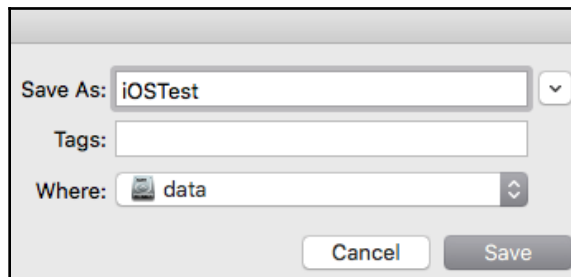
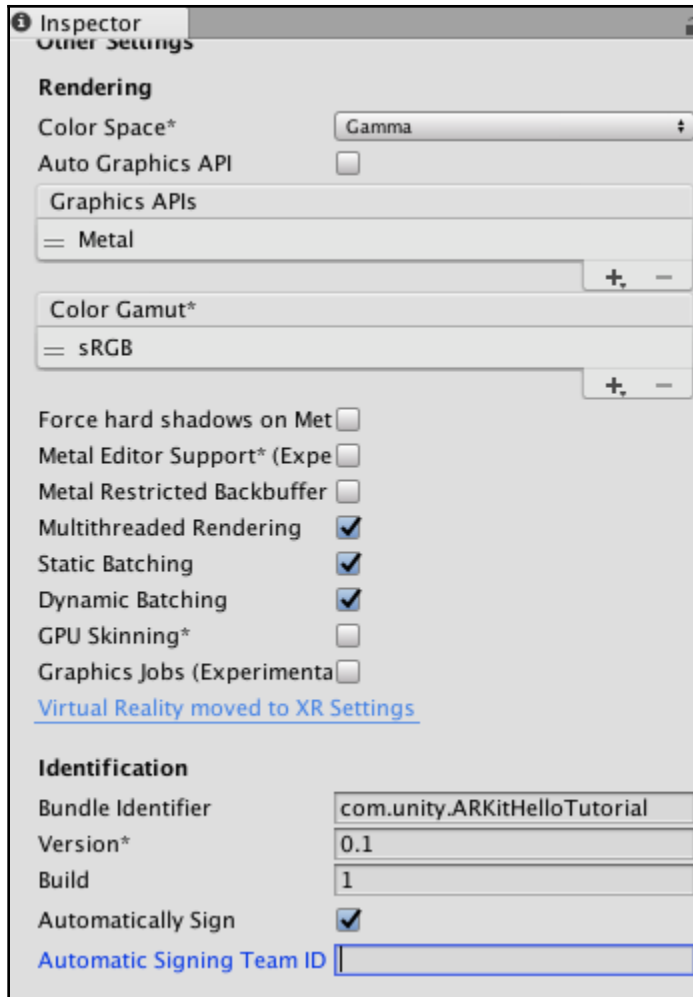
OFF Enable Unity Analytics ?

Add Asset Package

Cancel

Create project







# Welcome to Xcode

Version 9.2 (9C40b)



## **Get started with a playground**

Explore new ideas quickly and easily.



## **Create a new Xcode project**

Create an app for iPhone, iPad, Mac, Apple Watch or Apple TV.



## **Clone an existing project**

Start working on something from an SCM repository.



Unity-iPhone

~/ARKitTutorial/iOSTest



LearningSwift

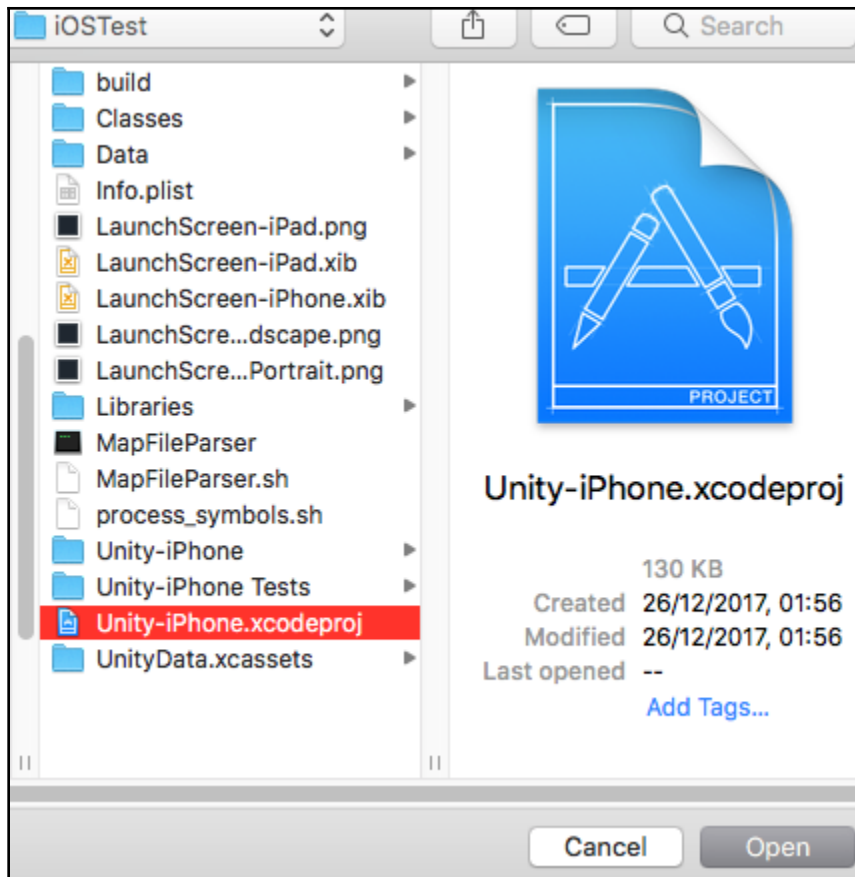
DATA DRIVE/xcodefiles



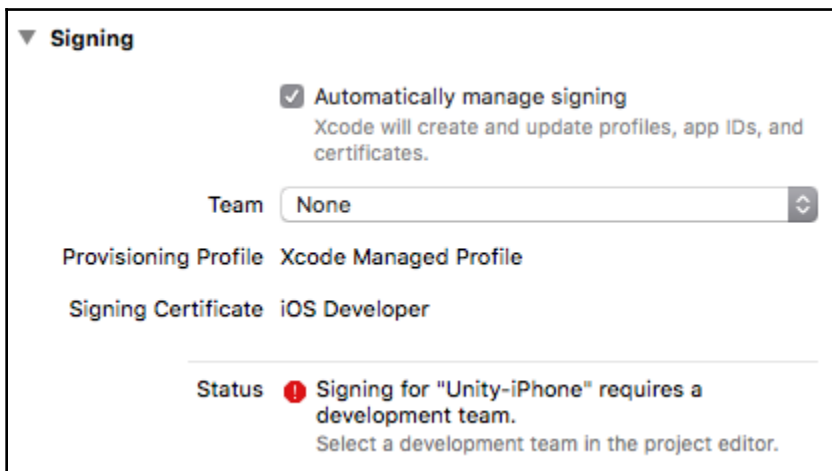
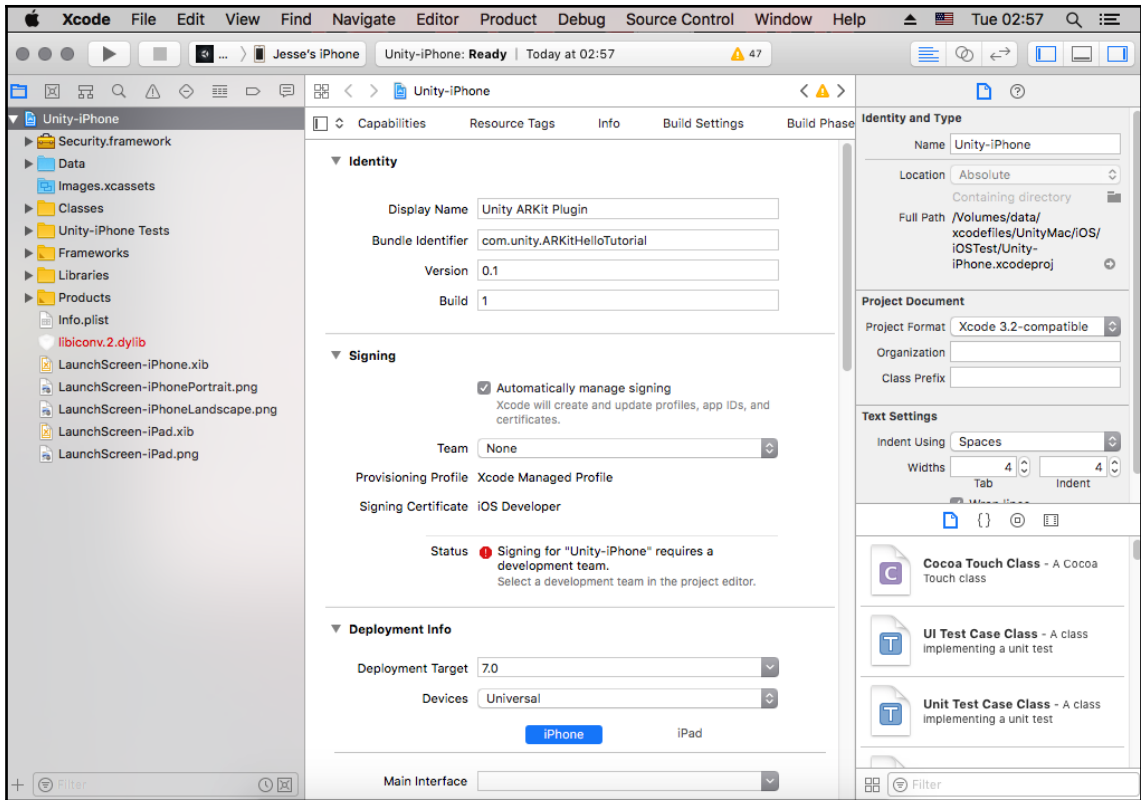
Test

DATA DRIVE/xcodefiles

Open another project...







▼ **Signing**

**Automatically manage signing**  
Xcode will create and update profiles, app IDs, and certificates.

Team

Provisioning Profile  ⓘ

Signing Certificate

▼ **Deployment Info**

Deployment Target

Devices

Main Interface

Device Orientation

- Portrait
- Upside Down
- Landscape Left
- Landscape Right

Status Bar Style

- Hide status bar
- Requires full screen

▼ Architectures				
Name	Resolved	Unity-iPhone	Unity-iPhone	iOS Default
ARCHS	Standard	Standard	Standard	Standard
▼ ONLY_ACTIVE_ARCH	<Multiple valu...	<Multiple valu...	No	No
Debug	Yes	Yes	No	No
Release	No	No		No
ReleaseForProfiling	Yes	Yes		No
ReleaseForRunning	Yes	Yes		No
SDKROOT	Latest iOS (iO...	Latest iOS (iO...	Latest iOS (iO...	Latest iOS (iOS...
▶ SUPPORTED_PLATFORMS	iOS	iOS	iOS	iOS


Unity-iPhone				
Unity-iPhone ▾ General Capabilities Resource Tags Info Build Settings Build Phases Build Rules				
Basic Customized All Combined Levels +				
▼ Architectures				
Name	Resolved	Unity-iPhone	Unity-iPhone	iOS Default
ARCHS	armv7 arm64	armv7 arm64	armv7	Standard
▼ ONLY_ACTIVE_ARCH	<Multiple valu...	<Multiple valu...	No	No
Debug	Yes	Yes	No	No
Release	No	No		No
ReleaseForProfiling	Yes	Yes		No
ReleaseForRunning	Yes	Yes		No
SDKROOT	Latest iOS (iO...	Latest iOS (iO...	Latest iOS (iO...	Latest iOS (iO...
▶ SUPPORTED_PLATFORMS	iphonios	iphonios	iphonios	iOS

Product	Debug	Source
Run		⌘R
Test		⌘U
Profile		⌘I
Analyze		⇧⌘B
Archive		
Build For		▶
Perform Action		▶
Build		⌘B
Clean		⇧⌘K
Stop		⌘.
Scheme		▶
Destination		▶
Create Bot...		

Unity-iPhone | Build **Succeeded** | Today at 03:14 ⚠ 47

⏪ ... ⏩ 📱 Jesse's iPhone

Device

✓  Jesse's iPhone

Build Only Device

 Generic iOS Device

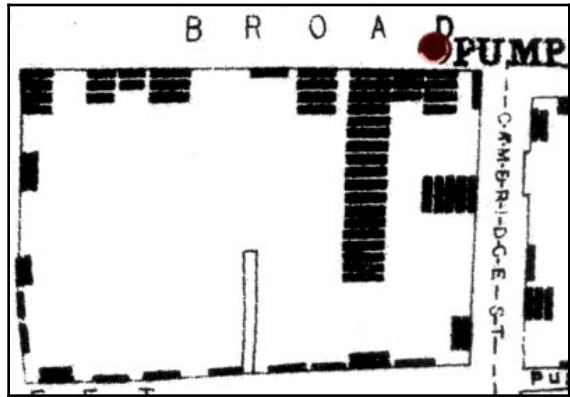
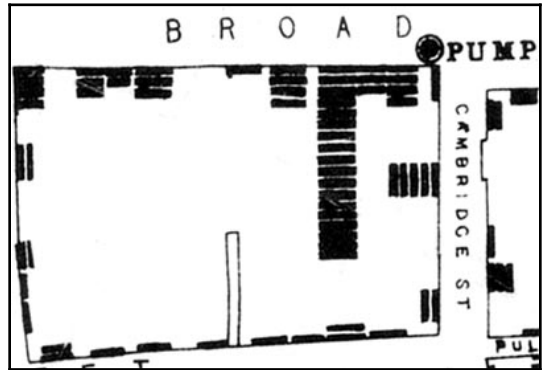
iOS Simulators

-  iPad (5th generation)
-  iPad Air
-  iPad Air 2
-  iPad Pro (9.7-inch)
-  iPad Pro (10.5-inch)
-  iPad Pro (12.9-inch)
-  iPad Pro (12.9-inch) (2nd generation)
-  iPhone 5s
-  iPhone 6
-  iPhone 6 Plus
-  iPhone 6s
-  iPhone 6s Plus
-  iPhone 7
-  iPhone 7 Plus
-  iPhone 8
-  iPhone 8 Plus
-  iPhone SE
-  iPhone X

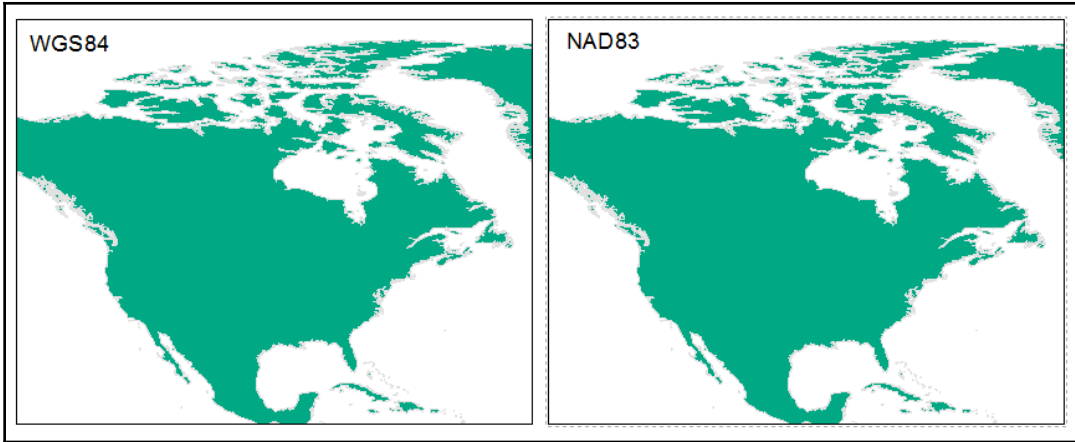
Add Additional Simulators...

Download Simulators...

# Chapter 2: GIS Fundamentals - The Power of Mapping







What is the viability of water as a renewable energy source in Virginia? → Look for all rivers and streams in the state and visualize them by location, speed and intensity. → Verify the integrity of the strongest and most viable locations.



## Compliance Navigation

- [Get Certified](#)
- [Register Product](#)
- [Renew Certification](#)

## Certified and Implementing Products

[Register now or update your product listing](#)

[Help](#)

Standard:



Product Provider:

**Compliant Products Only**
 **Reference Implementations Only**
 **All Implementations**

Found 60 organizations with 289 products with 952 standard implementations, 952 of which are currently compliant, and 64 are reference implementations

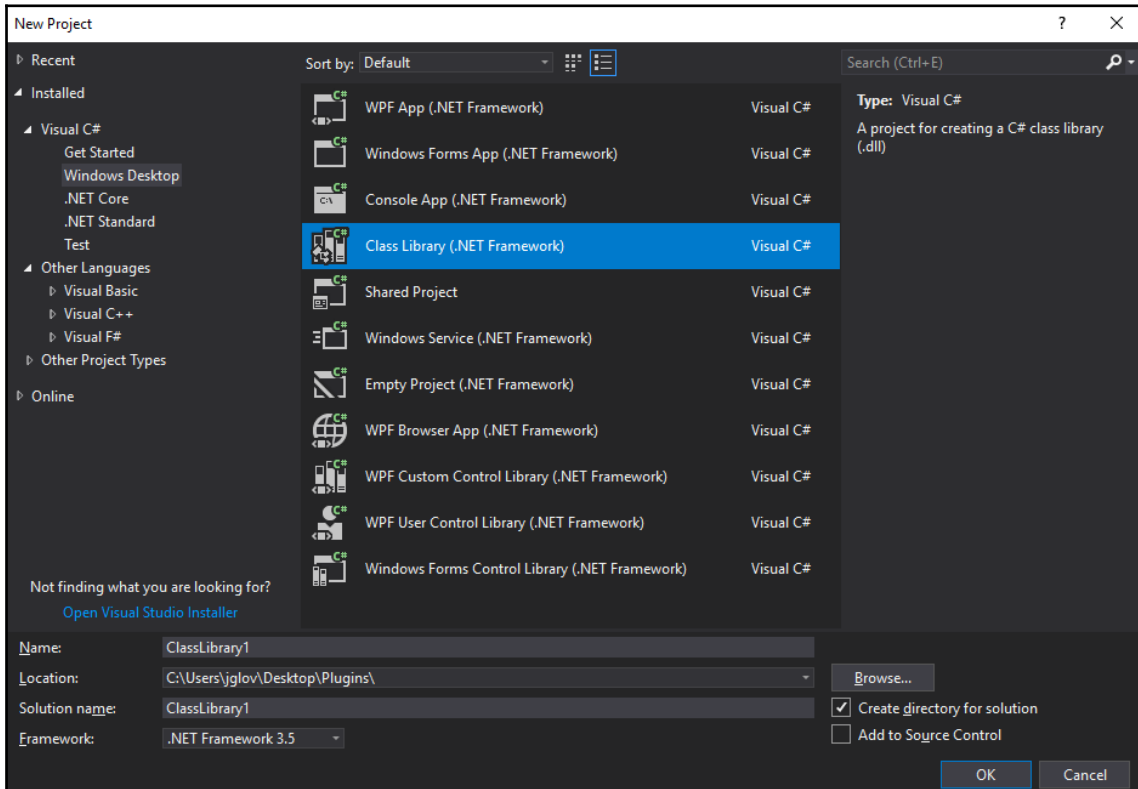
### Actian Corporation [\(view all products\)](#)

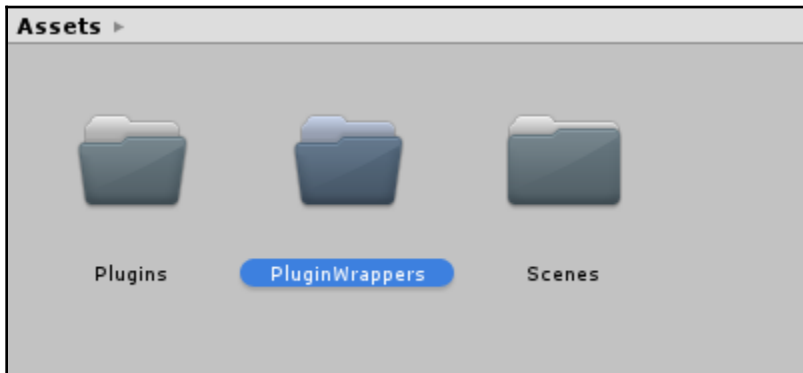
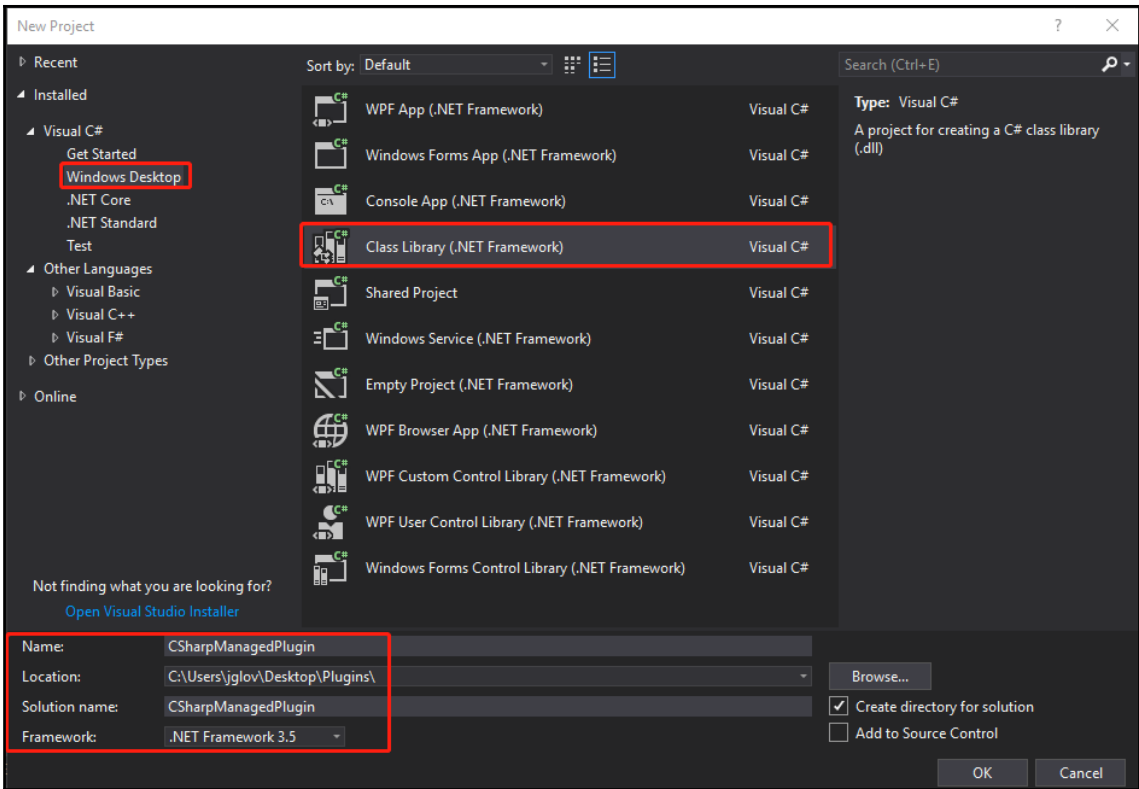
[Top](#) ▲

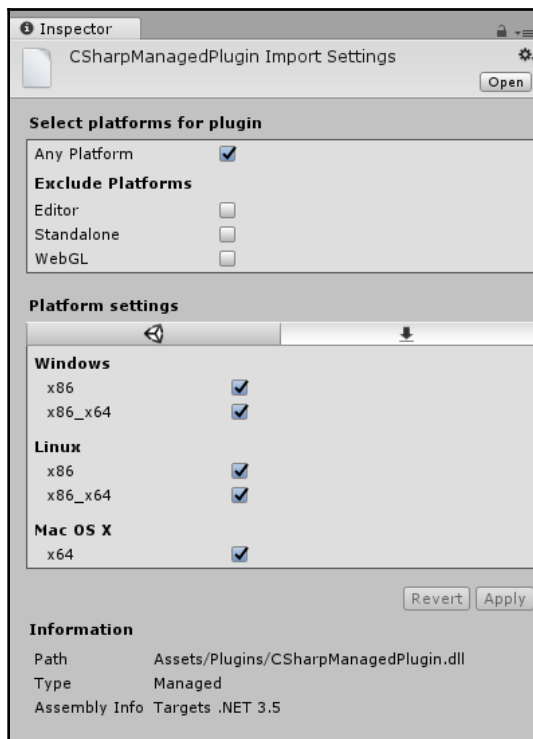
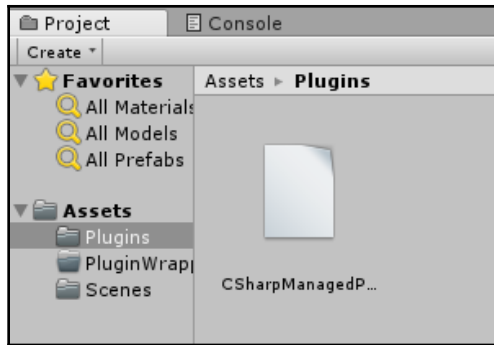
Ingres Database 11.0 <a href="#">↗</a>	 Alex Trofast	Registered: 2017-03-14
<input checked="" type="checkbox"/> Implementation Specification for Geographic information - Simple feature access - Part 2: SQL option 1.1		Certified: 2017-03-30
<input checked="" type="checkbox"/> Simple Features - SQL - Types and Functions 1.1		Certified: 2017-03-30
Ingres Database 10.2 <a href="#">↗</a>	 Alex Trofast	Registered: 2014-08-11
<input checked="" type="checkbox"/> Implementation Specification for Geographic information - Simple feature access - Part 2: SQL option 1.1		Certified: 2014-09-05
<input checked="" type="checkbox"/> Simple Features - SQL - Types and Functions 1.1		Certified: 2014-09-05

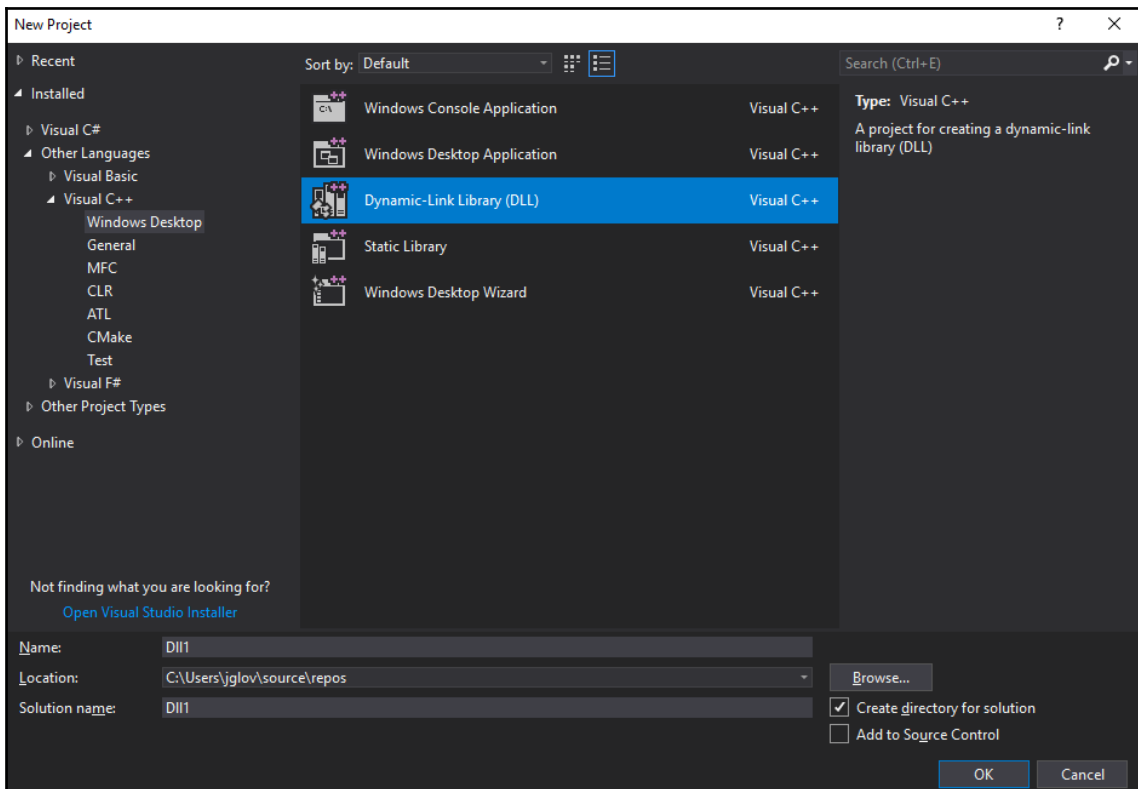
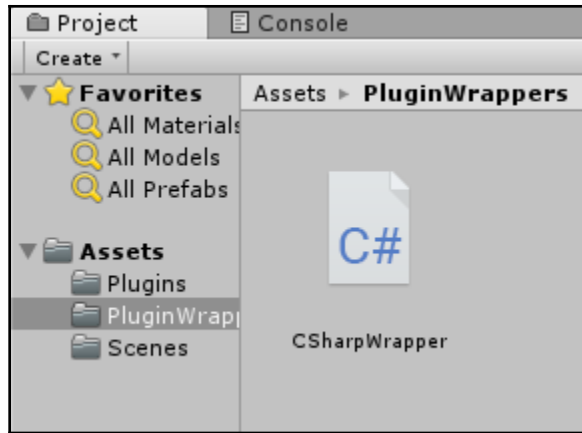


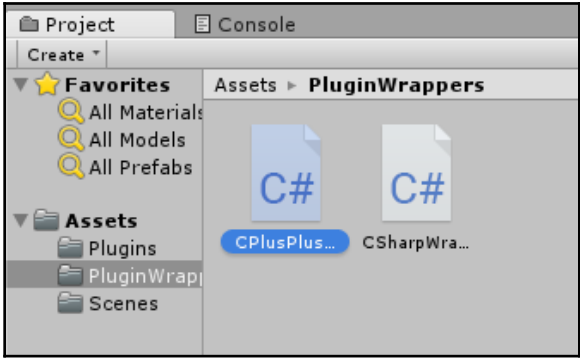
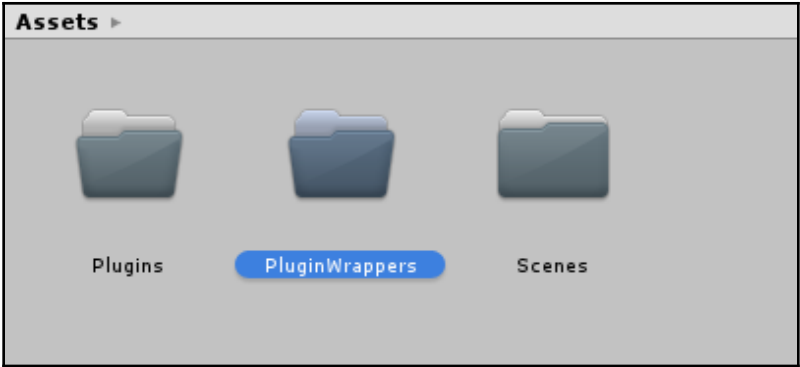
# Chapter 3: Censored - Various Sensor Data and Plugins













# Welcome to Xcode

Version 9.4 (9F1027a)



## **Get started with a playground**

Explore new ideas quickly and easily.



## **Create a new Xcode project**

Create an app for iPhone, iPad, Mac, Apple Watch or Apple TV.



## **Clone an existing project**

Start working on something from an SCM repository.



Show this window when Xcode launches

Choose a template for your new project:

iOS watchOS tvOS **macOS** Cross-platform

Filter

Application



Cocoa App



Game



Command  
Line Tool

Framework & Library



Cocoa Framework



Library



Metal Library



XPC Service



Bundle

Other



AppleScript App



Automator Action



Contacts Action



Generic Kernel



Image Unit

Cancel

Previous

Next

Choose options for your new project:

Product Name:

Team:

Organization Name:

Organization Identifier:

Bundle Identifier:

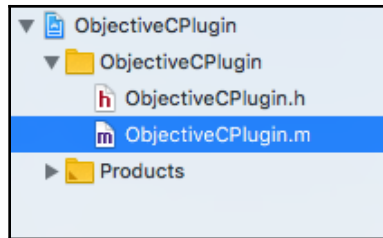
Framework:

Type:

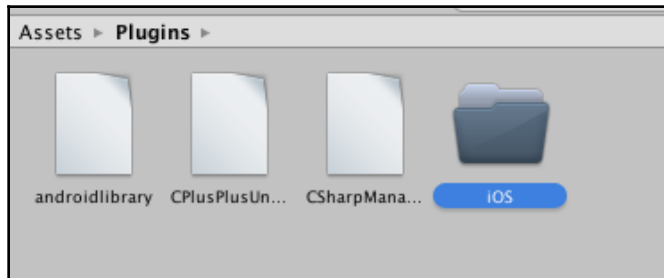
Framework  Cocoa  
 STL (C++ Library)  
Type  None (Plain C/C++ Library)

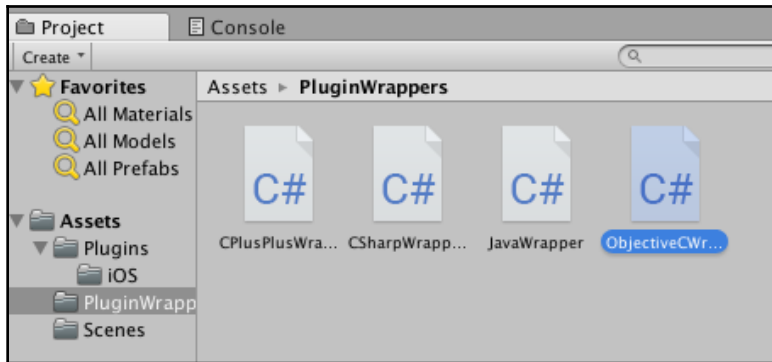
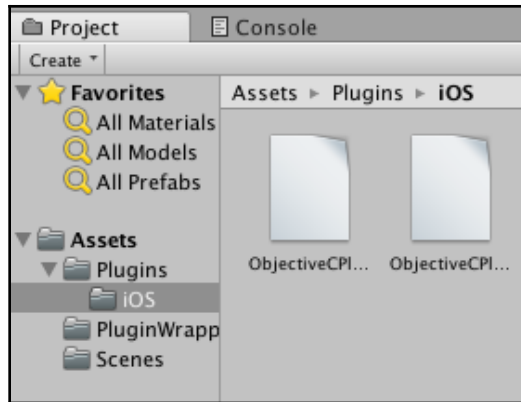
Type  Dynamic  
 Static

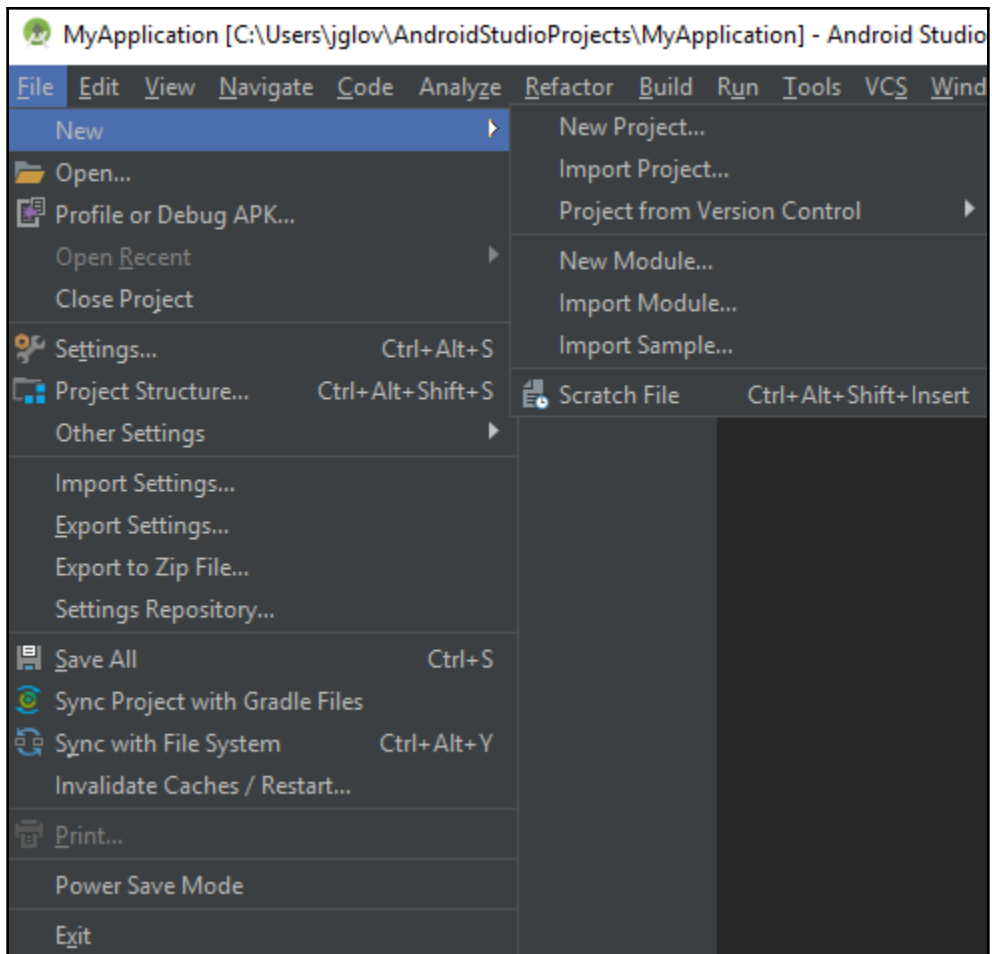




Product	Debug	Source
Run		⌘R
Test		⌘U
Profile		⌘I
Analyze		⇧⌘B
Archive		
Build For		▶
Perform Action		▶
Build		⌘B
Clean		⇧⌘K
Stop		⌘.
Scheme		▶
Destination		▶
Create Bot...		

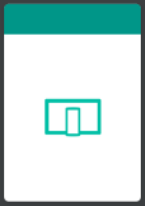








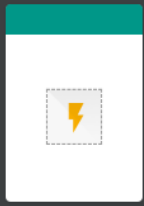
# New Module



Phone & Tablet Module



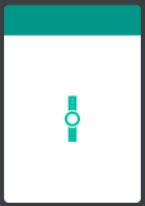
Android Library



Instant App



Feature Module



Android Wear Module



Android TV Module



Android Things Module



Import Gradle Project



Import Eclipse ADT Project



Import JAR/AAR Package



Java Library

Previous

**Next**

Cancel

Finish



## Configure the new module

Application/Library name

Module name

Package name

Done

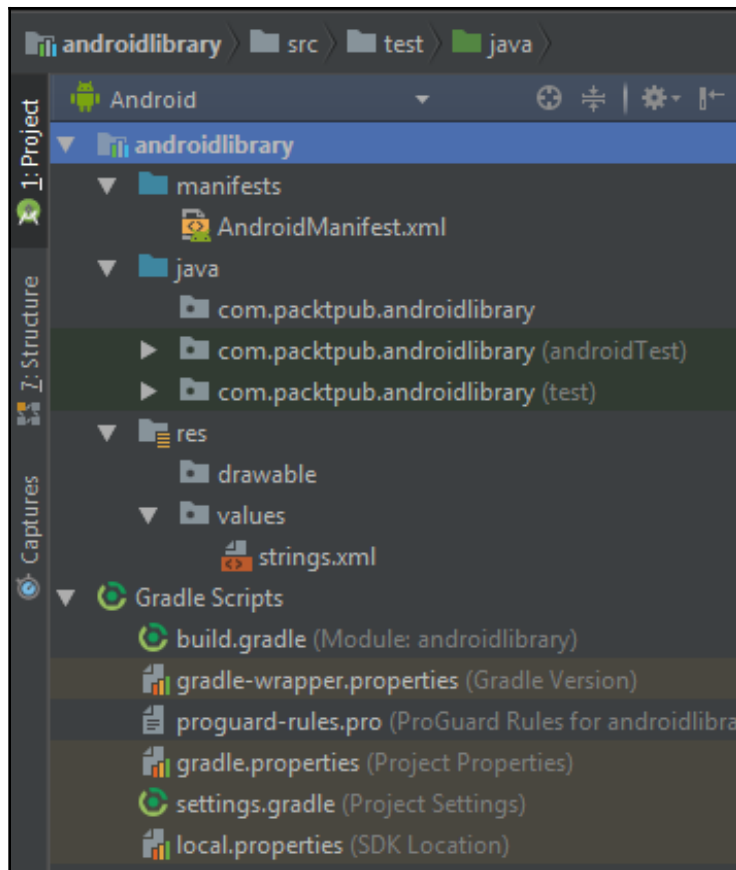
Minimum SDK

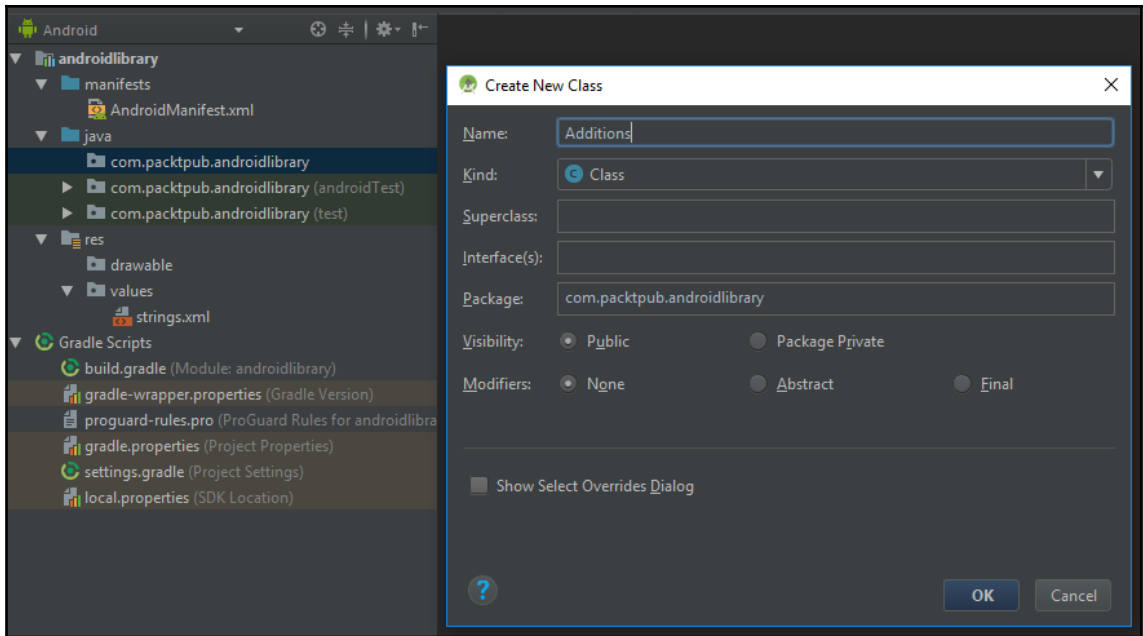
Previous

Next

Cancel

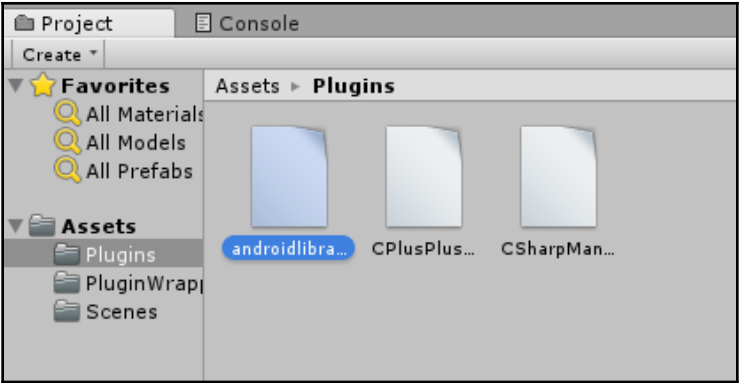
Finish





This PC > Desktop > Plugins > AndroidLibrary > MyApplication >

Name	Date modified	Type	Size
.gradle	6/3/2018 8:46 AM	File folder	
.idea	6/3/2018 8:46 AM	File folder	
androidlibrary	6/3/2018 8:46 AM	File folder	
gradle	6/3/2018 8:46 AM	File folder	
JavaLib	6/3/2018 8:46 AM	File folder	
mobile	6/3/2018 8:46 AM	File folder	
.gitignore	5/19/2018 2:35 PM	GITIGNORE File	1 KB
build.gradle	5/19/2018 2:35 PM	GRADLE File	1 KB
gradle.properties	5/19/2018 2:54 PM	PROPERTIES File	1 KB
gradlew	5/19/2018 2:35 PM	File	6 KB
gradlew	5/19/2018 2:35 PM	Windows Batch File	3 KB
local.properties	5/19/2018 2:35 PM	PROPERTIES File	1 KB
MyApplication.iml	5/19/2018 2:56 PM	IML File	1 KB
settings.gradle	6/3/2018 6:39 AM	GRADLE File	1 KB





# Chapter 4: The Sound of Flowery Prose

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	0.2 Use of this document.....	1
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	0.4 Basis of this Document.....	2
	0.5 A Reference Architecture for the IDA Programme.....	3
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[Targeted platforms](#)

[Monetization model \(Brief/Document\)](#)

[Project Scope](#)

[Influences \(Brief\)](#)

- <Influence #1>

- <Influence #2>

- <Influence #3>

- <Influence #4>

[The elevator Pitch](#)

[Project Description \(Brief\):](#)

[Project Description \(Detailed\)](#)

[What sets this project apart?](#)

[Core Gameplay Mechanics \(Detailed\)](#)

- <Core Gameplay Mechanic #1>

- <Core Gameplay Mechanic #2>

- <Core Gameplay Mechanic #3>

- <Core Gameplay Mechanic #4>

[Story and Gameplay](#)

[Story \(Brief\)](#)

[Story \(Detailed\)](#)

[Gameplay \(Brief\)](#)

[Gameplay \(Detailed\)](#)

[Assets Needed](#)

- 2D

- 3D

- Sound

- Code

- Animation

[Schedule](#)

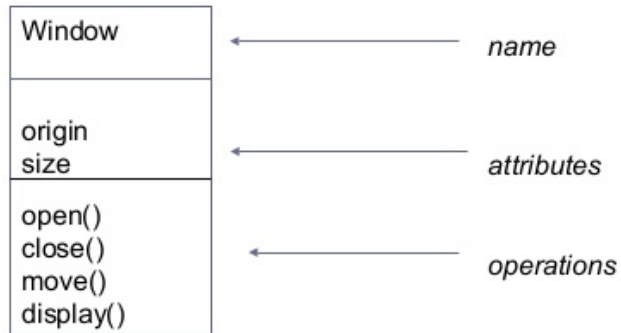
- <Object #1>

- <Object #2>

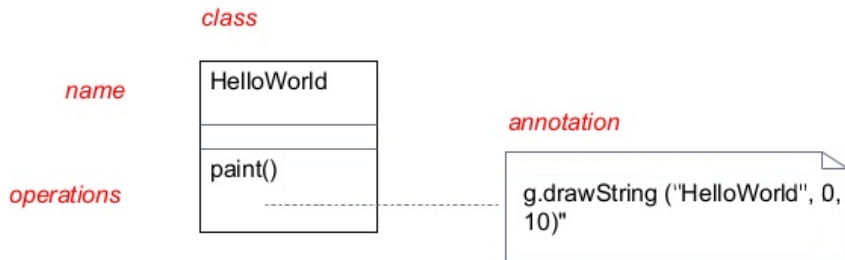
- <Object #3>

- <Object #4>

# Notation: Classes



# The "Hello, World" Example



Projects

Learn

Installs

New

Open



My account

On Disk

Chapter4

Path: /Users/jessegllover/Desktop/Sound of Flowery prose | Unity version: 2018.1.2f1

...

In the Cloud 1

Home > Essentials > Tutorial Projects > Unity ARKit Plugin

UNITY TECHNOLOGIES

## Unity ARKit Plugin

★★★★☆ 52 user reviews

FREE

[Add to My Assets](#)

This is an *experimental* native plugin that enables using all the functionality of the *ARKit SDK* simply within your Unity projects for iOS. The plugin exposes *ARKit SDK's* world tracking capabilities, rendering the camera video input, plane detection and update, point cloud extraction, light estimation, and hit testing API to Unity developers for their AR projects. This plugin is a preview quality build that should help to get you up and running quickly with this technology, but the implementation and APIs may change to cater to the underlying technology. The plugin is [open sourced](#) and is released under the [MIT License](#). Some assets released under [Unity Companion License](#).

**Requirements:**

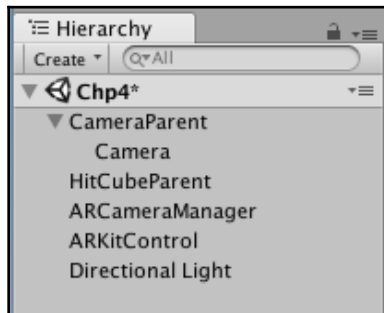
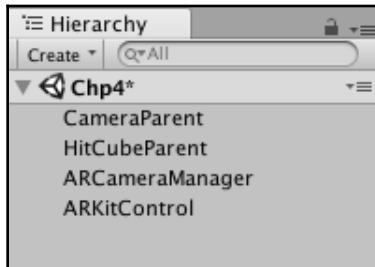
- \* Unity v5.6.2+
- \* iOS 11+
- \* Xcode 9.x with latest iOS SDK that contains ARKit Framework
- \* iOS device that supports ARKit (iPhone 6S or later, iPad (2017) or later)
- \* ARKit Face Tracking requires iPhone X

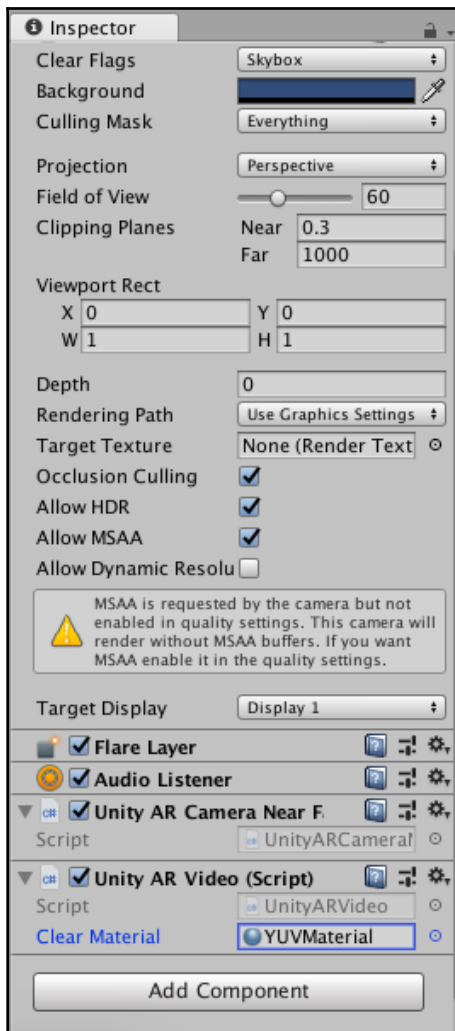
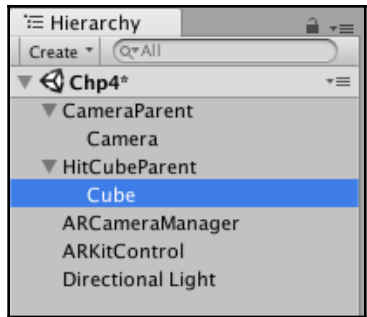
[Support Forum](#) [Unity ARKit plugin support](#)

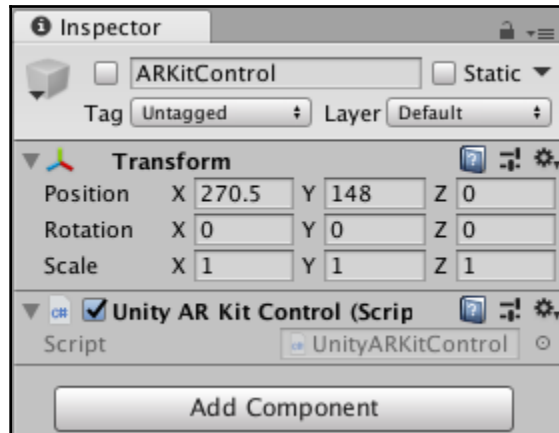
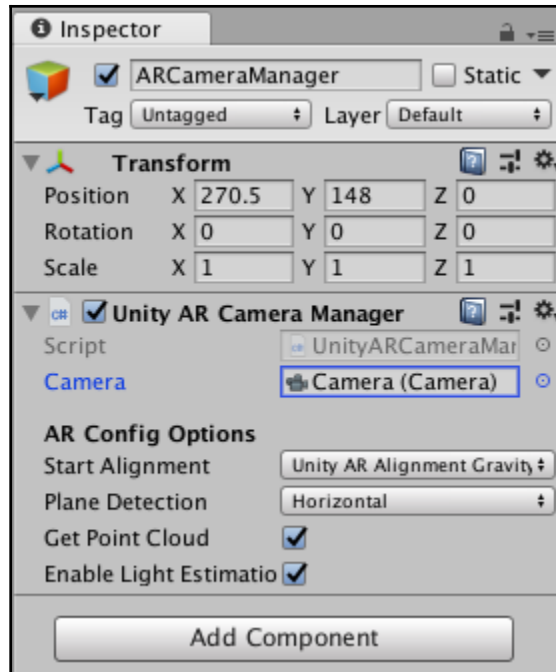
<b>Package contents</b>	10.6 MB	
<b>Releases</b>	current ver. 1.0.14	<a href="#">Show More</a>
<b>Supported Unity versions</b>	5.6.2 or higher	<input type="button" value="Share"/> <input type="button" value="Add to List"/>

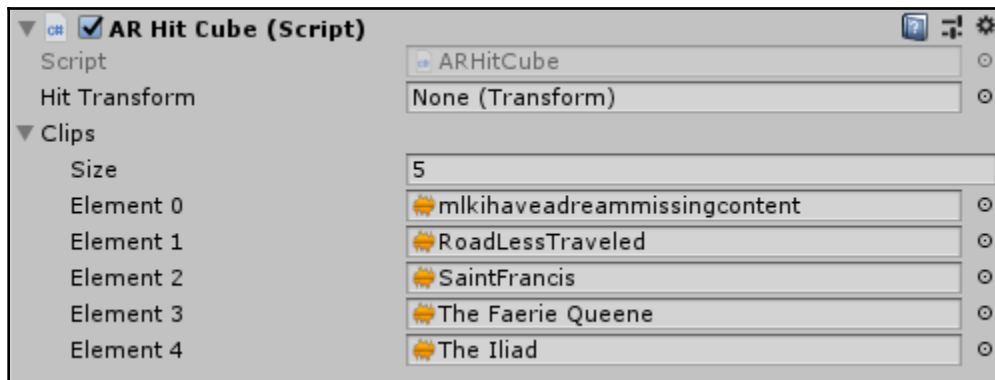
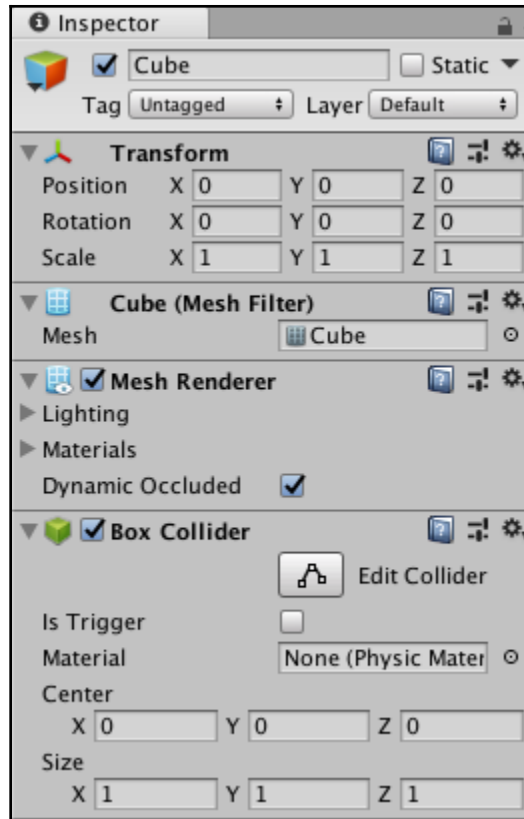
[Report this asset](#)

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▼ CR  **AR Hit Cube (Script)** ⓘ ⌵ ⚙

Script  ⓘ

Hit Transform  ⓘ





▼ Clips

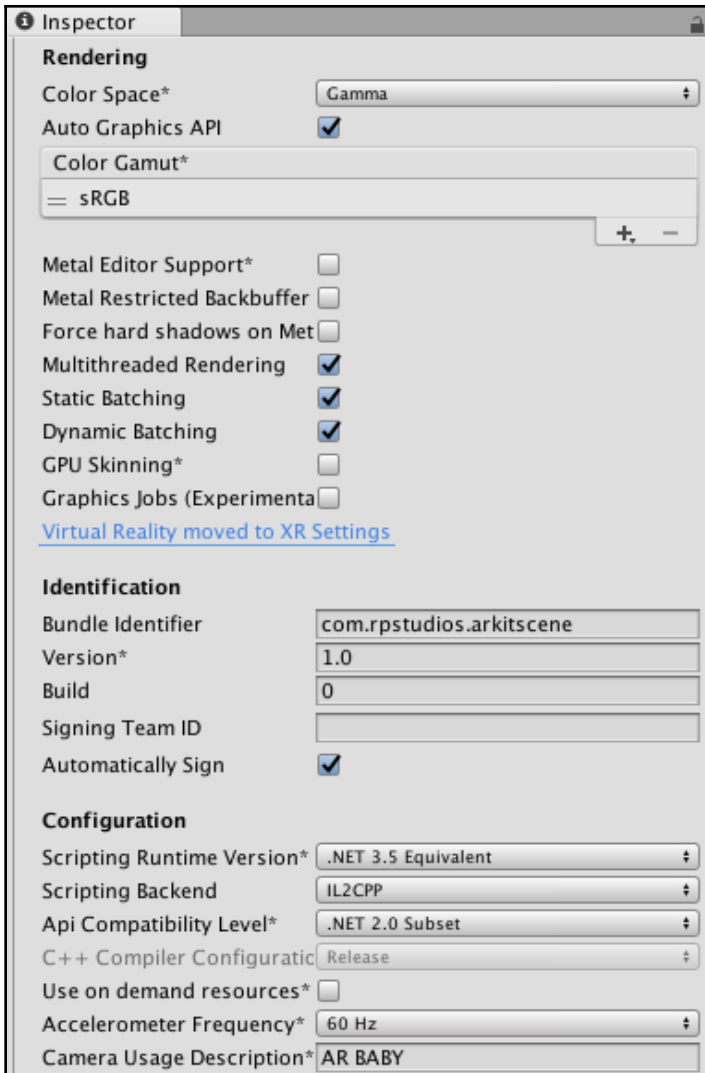
### Scenes In Build

- UnityARKitPlugin/Examples/UnityARShadows/UnityARShadows
- UnityARKitPlugin/Examples/UnityAROcclusion/UnityAROcclusion
- UnityARKitPlugin/ARKitRemote/UnityARKitRemote
- UnityARKitPlugin/Examples/FocusSquare/FocusSquareScene
- UnityARKitPlugin/Examples/FaceTracking/FaceAnchorScene
- UnityARKitPlugin/Examples/FaceTracking/FaceMeshScene
- UnityARKitPlugin/Examples/FaceTracking/FaceBlendshapeScene
- UnityARKitPlugin/Examples/FaceTracking/FaceDirectionalLightEstimate
- Chapter4/Scenes/Chp4
- UnityARKitPlugin/Examples/UnityARKitScene/UnityARKitScene

0

### Platform

 PC, Mac & Linux Standalone	 iOS
 iOS	Run in Xcode <input type="text" value="v.9.4 /Applications/Xcode.app"/>
 WebGL	Run in Xcode as <input type="text" value="Release"/>
	Symlink Unity libraries <input checked="" type="checkbox"/>





# Welcome to Xcode

Version 9.4 (9F1027a)



## Get started with a playground

Explore new ideas quickly and easily.



## Create a new Xcode project

Create an app for iPhone, iPad, Mac, Apple Watch or Apple TV.

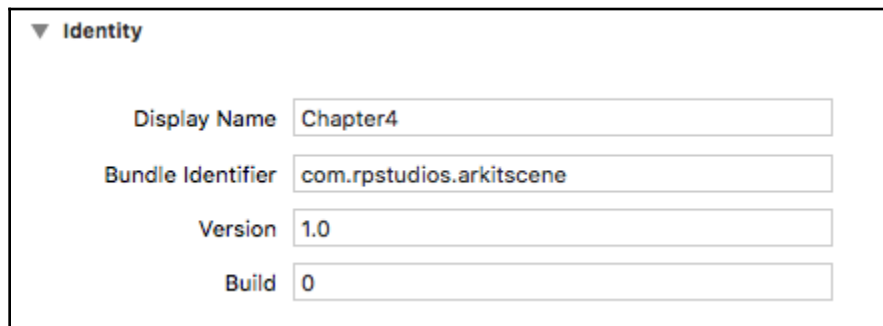
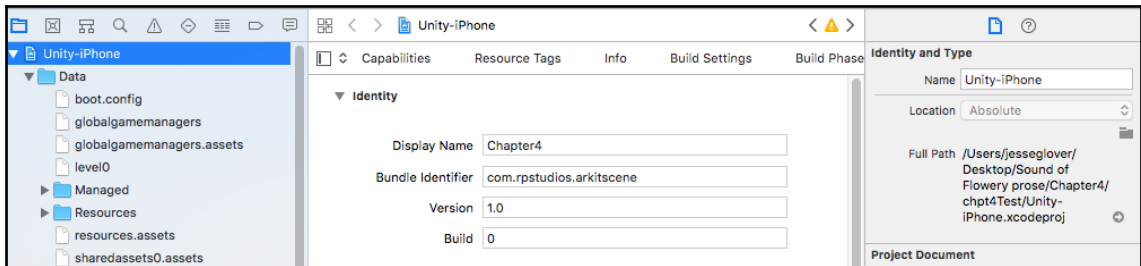


## Clone an existing project

Start working on something from an SCM repository.




Show this window when Xcode launches




▼ Signing

Automatically manage signing
























Xcode will create and update profiles, app IDs, and certificates.

Team  

Provisioning Profile Xcode Managed Profile 

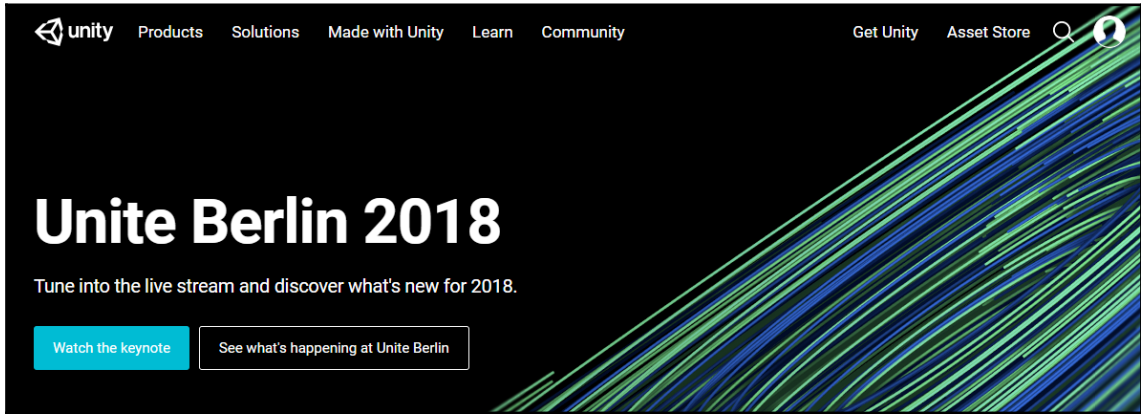
Signing Certificate iPhone Developer: jglover88@hotmail.com (7NAZ...

▼ **Linked Frameworks and Libraries**

Name	Status
 Security.framework	Required ⇅
 MediaToolbox.framework	Required ⇅
 libiPhone-lib.a	Required ⇅
 CoreText.framework	Required ⇅
 AudioToolbox.framework	Required ⇅
 AVFoundation.framework	Optional ⇅
 CFNetwork.framework	Required ⇅
 CoreGraphics.framework	Required ⇅
 CoreLocation.framework	Required ⇅
 CoreMedia.framework	Required ⇅
 CoreMotion.framework	Optional ⇅
 CoreVideo.framework	Required ⇅
 Foundation.framework	Required ⇅
 MediaPlayer.framework	Required ⇅
 OpenAL.framework	Required ⇅
 OpenGL.framework	Required ⇅
 QuartzCore.framework	Required ⇅
 SystemConfiguration.framework	Required ⇅
 UIKit.framework	Required ⇅
 libconv.2.dylib	Required ⇅
 libl2cpp.a	Required ⇅
 Metal.framework	Optional ⇅
 ARKit.framework	Required ⇅

▼ Architectures	Setting	Unity-iPhone
▶ Architectures	Standard	↕
▶ Base SDK	Latest iOS (iO...	↕
▼ Build Active Architecture Only	<Multiple valu...	↕
Debug	Yes	↕
Release	No	↕
ReleaseForProfiling	Yes	↕
ReleaseForRunning	Yes	↕
Supported Platforms	iphones	↕

# Chapter 5: Picture Puzzle - The AR Experience



unity Products Solutions Made with Unity Learn Community Get Unity Asset Store

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<ul style="list-style-type: none"><li>All core engine features</li></ul>	<ul style="list-style-type: none"><li>Unity Success Advisor</li><li>Unity Game Dev Courses (\$144 value - only for Plus until 12/31/18)</li><li>20% off Asset Store Subscriber Benefit</li><li>Customizable Splash Screen</li><li>Performance Crash Reporting</li><li>Extended Unity Analytics</li><li>Flexible Seat Management</li><li>Pro Skin Editor UI</li><li>Plan eligibility: annual revenue or funds raised of \$200k or less</li></ul>	<ul style="list-style-type: none"><li>All the features of Plus</li><li>Premium support and source code access plans available</li><li>Plan eligibility: no limits on revenue or funding</li></ul>
<a href="#">Compare to Plus</a>	<a href="#">Compare to Pro</a>	<a href="#">Compare to Plus</a>

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[Official Releases](#)


Beta Releases



Unity 2018.1.5f1

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Unity 2017.4.5f1 LTS 

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Unity 2017.2.3f1

Download



Unity 2017.1.4f1 

Download

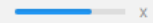
On my machine

[Official Releases](#)

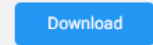
Beta Releases



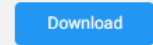
Unity 2018.1.5f1



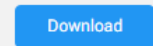
Unity 2017.4.5f1 LTS ?



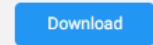
Unity 2017.3.1f1



Unity 2017.2.3f1



Unity 2017.1.4f1 ⓘ



## Add components to your install

Editor	download size	install size
--------	---------------	--------------

<input checked="" type="checkbox"/> 2018.1.5f1	596.2 MB	2.0 GB
--	----------	--------

### Components

<input checked="" type="checkbox"/> Documentation	404.2 MB	813.6 MB
---	----------	----------

<input type="checkbox"/> Standard Assets	189.9 MB	189.9 MB
--	----------	----------

<input type="checkbox"/> Example Project	260.8 MB	564.5 MB
--	----------	----------

### Platforms

Total space required: 3.8 GB

Space available: 58.0 GB

Cancel

Done

## Build Settings












### Scenes In Build

- Scenes/SampleScene 0

Add Open Scenes

### Platform

-  PC, Mac & Linux Standalone
-  iOS
-  tvOS
-  Android
-  Xbox One
-  PS Vita
-  PS4
-  Universal Windows Platform

 PC, Mac & Linux Standalone

- Target Platform: Windows
- Architecture: x86\_64
- Copy PDB files:
- Development Build:
- Autoconnect Profiler:
- Script Debugging:
- Scripts Only Build:

Compression Method: Default

[Learn about Unity Cloud Build](#)

Switch Platform

Player Settings...

Build

Build And Run

# Build Settings



## Scenes In Build

- Scenes/SampleScene 0

Add Open Scenes

## Platform

- PC, Mac & Linux Standalone
- iOS
- tvOS
- Android
- Xbox One
- PS Vita
- PS4
- Universal Windows Platform

PC, Mac & Linux Standalone

- Target Platform: Windows
- Architecture: x86\_64
- Copy PDB files:
- Development Build:
- Autoconnect Profiler:
- Script Debugging:
- Scripts Only Build:

Compression Method: Default

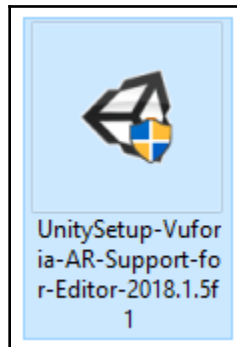
[Learn about Unity Cloud Build](#)

Switch Platform

Player Settings...

Build

Build And Run



[Back To License Manager](#)

## Add a free Development License Key

### App Name

You can change this later

### License Key

Develop

Price: No Charge

Reco Usage: 1,000 per month

Cloud Targets: 1,000

VuMark Templates: 1 active

VuMarks: 100

By checking this box, I acknowledge that this license key is subject to the terms and conditions of the [Vuforia Developer Agreement](#).

Cancel

Confirm

## License Manager

Create a license key for your application.

Get Development Key

Buy Deployment Key

Name	Type	Status <span>▼</span>	Date Modified
<a href="#">Chapter5</a>	Develop	Active	Jun 18, 2018 02:22
<a href="#">VuforiaIntro</a>	Develop	Active	Dec 09, 2017 08:49



## Chapter5 [Edit Name](#) [Delete License Key](#)

[License Key](#)

[Usage](#)

Please copy the license key below into your app

```
AXpzWXn/////AAABGSkyG9hm1E9ruo0qDlqRSQ5+9KOH7oh/cDkx  
1Ea/smSYQo/s/toTn6us87g/7SOF15tgx8KFnGyNJCB1pvdSPtwG  
42CT1YSvJzcRE2+CsNykhAyky7dGdOVLp7WEKNL/fqJbGz+4joYW  
ITRDizcaRb62aaXBqggo6oopkik1b8GANxbIYSEeOvR0KTF+3OSA  
ytuNd9Wbx4bLvDhgCs9Z8bS5UOVwAg2hXcPkP8+/spFs4v14p0bg  
i6ZrRagHrpghMHqDlzmW7F46ZNu4rdjAUEjf8NwO6w7NyjqQjNen  
1x0v4gmne8Mxjz9H3qavkb6h4WKaboiKCSSzM930pu8fapHJzqWx  
hRzkaIW34EedYENp
```

**Type:** Develop

**Status:** Active

**Created:** Jun 18, 2018 02:22

**History:**

License Created - Today 02:22

## Target Manager

Use the Target Manager to create and manage databases and targets.

Add Database

Database	Type	Targets
----------	------	---------



Create your first Database

## Create Database

Name:

Type:

- Device
- Cloud
- VuMark

Target Manager > Words\_Pictures

## Words\_Pictures [Edit Name](#)

Type: Device

Targets (0)

<input type="checkbox"/> Target Name	Type	Rating	Status <span>▼</span>	Date Modified
--------------------------------------	------	--------	-----------------------	---------------

Home Pricing Downloads Library **Develop** Support

License Manager **Target Manager**

## Target Manager

Use the Target Manager to create and manage databases and targets.

Add Database

Database	Type	Targets	Date Modified
<a href="#">Words_Pictures</a>	Device	0	Jun 18, 2018 02:23

[Target Manager](#) > [Words\\_Pictures](#)

## Words\_Pictures [Edit Name](#)

Type: Device

Targets (0)

Add Target Download Database (All)

<input type="checkbox"/> Target Name	Type	Rating	Status <span>▼</span>	Date Modified
--------------------------------------	------	--------	-----------------------	---------------

## Add Target

Type:



Single Image



Cuboid



Cylinder



3D Object

File:

Choose File

Browse...

.jpg or .png (max file 2mb)

Width:

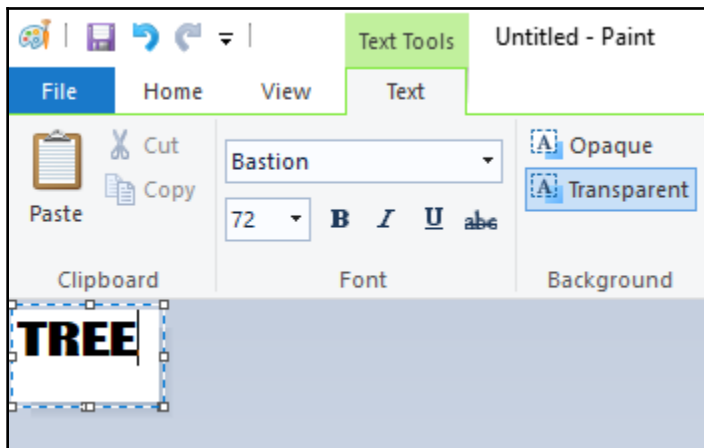
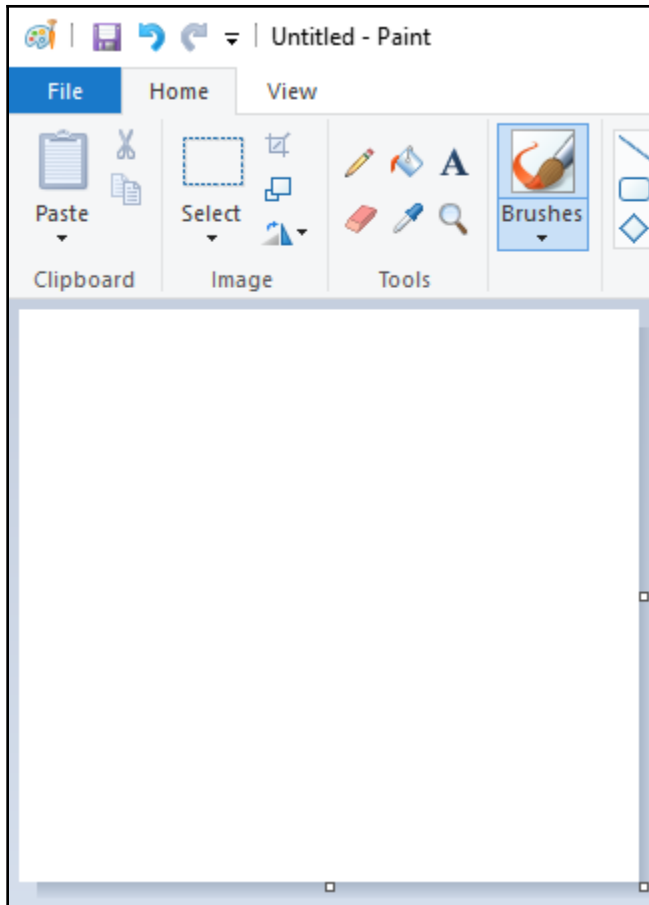
Enter the width of your target in scene units. The size of the target should be on the same scale as your augmented virtual content. Vuforia uses meters as the default unit scale. The target's height will be calculated when you upload your image.

Name:

Name must be unique to a database. When a target is detected in your application, this will be reported in the API.

Cancel

Add





## Add Target

Type:



Single Image



Cuboid



Cylinder



3D Object

File:

TreeWord.png

Browse...

.jpg or .png (max file 2mb)

Width:

20

Enter the width of your target in scene units. The size of the target should be on the same scale as your augmented virtual content. Vuforia uses meters as the default unit scale. The target's height will be calculated when you upload your image.

Name:

TreeWord

Name must be unique to a database. When a target is detected in your application, this will be reported in the API.

Cancel

Add



## Add Target

### Type:



Single Image



Cuboid



Cylinder



3D Object

### File:

TreeWord.png

Browse...

.jpg or .png (max file 2mb)

### Width:

20

Enter the width of your target in scene units. The size of the target should be on the same scale as your augmented virtual content. Vuforia uses meters as the default unit scale. The target's height will be calculated when you upload your image.

### Name:

TreeWord

Name must be unique to a database. When a target is detected in your application, this will be reported in the API.

Cancel

Add

<input type="checkbox"/>	Target Name	Type	Rating	Status ▾	Date Modified
<input type="checkbox"/>	<b>TREE</b> Tree	Single Image	★★★★☆	Active	Jun 19, 2018 02:57

Target Name

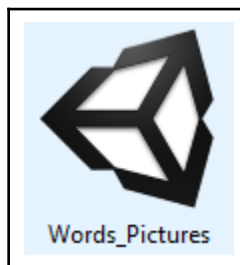
1 selected Delete

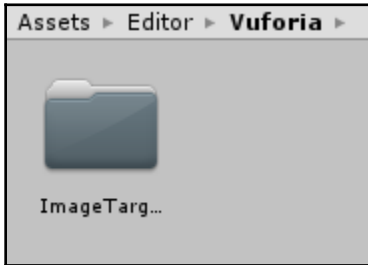
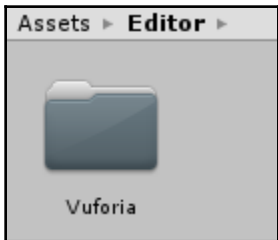
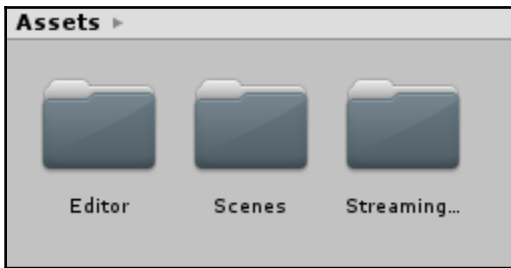
TREE Tree

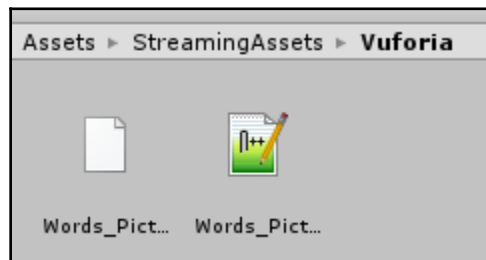
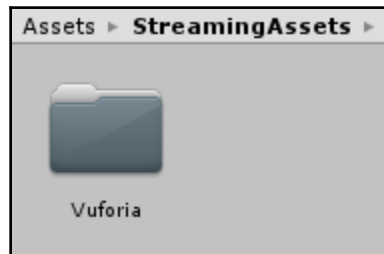
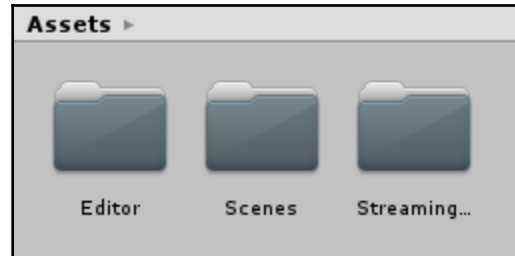


Tree **Untitled** Single Image ★★★★★ Active Jun 18, 2018 02:38

Download Database (All)








# Tree

by TmStudio

**Free**

[Download](#)



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 **Tree** Free

- [Tree\\_max2010\\_and\\_textures.rar](#) 3ds Max (version: 2010) - 4.59 MB
- [Tree\\_max2012\\_and\\_textures.rar](#) 3ds Max (version: 2012) - 4.59 MB
- [Tree\\_max2014\\_and\\_textures.rar](#) 3ds Max (version: 2014) - 4.66 MB
- [Tree\\_FBX.rar](#) Autodesk FBX (version: 2009) - 8.29 MB
- [Tree\\_OBJ.rar](#) OBJ - 6.83 MB
- [Tree\\_Mat\\_Library.rar](#) Other - 1 KB
- [Tree\\_textures.rar](#) Other - 806 KB

[show fewer](#)

**Assets** ▶

-  Editor
-  Models
-  Scenes
-  Streaming...

Assets ▶ Models ▶ **Tree**



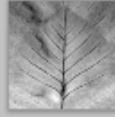
leaf



leaf\_Bump



leaf\_Dif



leaf\_Spec



Tree\_FBX



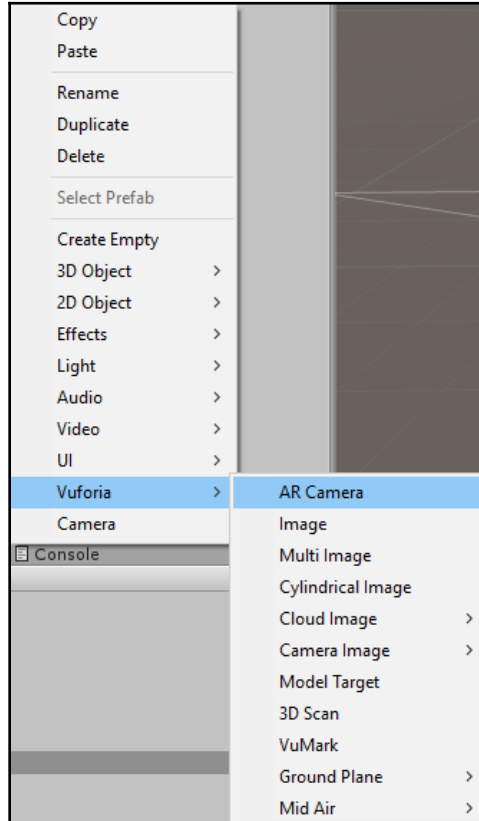
trunk



Trunk



Trunk\_Bump



**Inspector**

ARCamera  Static

Tag Untagged Layer Default

**Transform**

Position X 0 Y 1 Z -10

Rotation X 0 Y 0 Z 0

Scale X 1 Y 1 Z 1

**Camera**

Clear Flags Solid Color

Background [Color Picker]

Culling Mask Everything

Projection Perspective

Field of View 60

Clipping Planes Near 0.05 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

Allow HDR

Allow MSAA

Allow Dynamic Resolution

Target Display Display 1

**Audio Listener**

**Vuforia Behaviour (Script)**

[Download new Vuforia version: 7.1.35](#)

World Center Mode FIRST\_TARGET

Open Vuforia configuration

**Default Initialization Error Handler (Script)**

Script DefaultInitializationErrorHandler

Add Component

## Vuforia 7.1 Software License



In order to continue downloading, you need to agree to the terms below.

Use of this Vuforia™ Software Development Kit or extension (the "Software") is subject in all respects to all of the terms and conditions of the Vuforia Developer Agreement, which can be found by clicking on "View in Browser" below. If you do not agree to all the terms and conditions of the Vuforia Developer Agreement, then you must not retain or in any manner use any of the Software.

[View in Browser](#)

[Accept](#)


[Decline](#)



**Inspector**  
VuforiaConfiguration Open

**Global**

Vuforia Version 7.1.31

 A new version of Vuforia is available: 7.1.35  
Upgrade to resolve an issue where anchors could be flipped following a re-localization by ARKit 1.5, iOS 11.3, and above.

[Download Vuforia 7.1.35](#)  
[Learn More](#)

App License Key `AXpzWXn/////AAABGSkYG9hm1E9ruo0qD  
IqRSQ5+9KOH7oh/cDkx1Ea/smsYQo/S/t  
oTn6us87a/7SOF15tax8KFnGvNjCB1pvdS`  
Add License

Delayed Initialization

Camera Device Mode MODE\_DEFAULT

Max Simultaneous Track 1

Max Simultaneous Track 1

Load Object Targets on

Camera Direction CAMERA\_DEFAULT

Mirror Video Background DEFAULT

**Digital Eyewear**

Device Type Handheld

**Databases**

 Databases will be automatically loaded and activated if its TrackingBehaviour is enabled on scene load.

VuforiaMars\_Images  
VuforiaMars\_ModelTarget  
VuforiaMars\_Object\_OT  
VuforiaMars\_VuMark  
Words\_Pictures

Add Database

**Video Background**

Enable video background

Video Background Shade Hidden/VR/VideoBackground

Number Divisions 2

Overflow geometry CLIP


Matte Shader Hidden/VR/ClippingMask

**Device Tracker**

Track Device Pose

**Webcam**

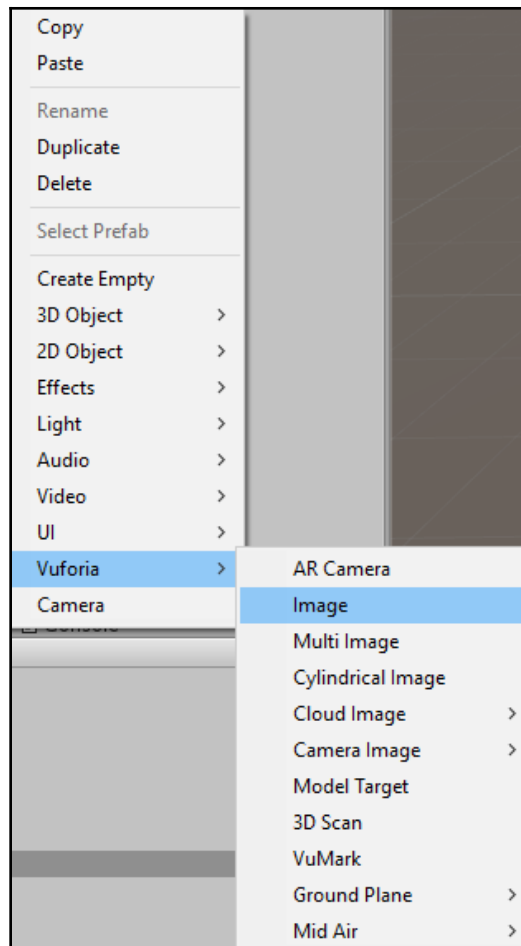
Disable Vuforia Play Mod

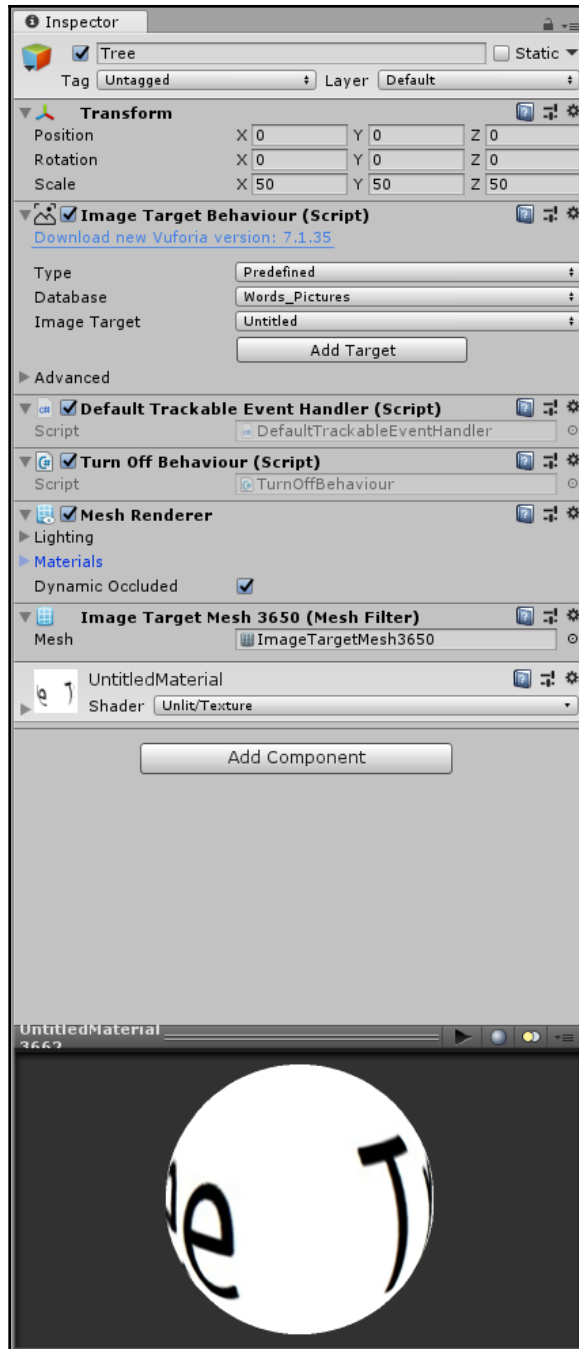
 No webcam profile has been found for your webcam model: 'USB2.0 PC CAMERA'.  
A default profile will be used.

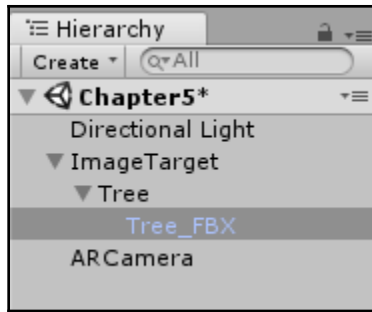
Webcam profiles ensure that Play Mode performs well with your webcam.  
You can create a custom profile for your camera by editing 'C:/Program

**Asset Labels**

AssetBundle None None







# Build Settings



## Scenes In Build

- Scenes/Chapter5 0

Add Open Scenes

## Platform

- PC, Mac & Linux Standalone**
- WebGL
- iOS
- tvOS
- Android**
- Xbox One
- PS Vita
- PS4



## PC, Mac & Linux Standalone

Target Platform:

Architecture:

Copy PDB files:

Development Build:

Autoconnect Profiler:

Script Debugging:

Scripts Only Build:

Compression Method:

[Learn about Unity Cloud Build](#)

Switch Platform

Player Settings...

**Build**

Build And Run

[Back To License Manager](#)

## Add a free Development License Key

### App Name

Chapter5

You can change this later

### License Key

Develop

Price: No Charge

Reco Usage: 1,000 per month

Cloud Targets: 1,000

VuMark Templates: 1 active

VuMarks: 100

By checking this box, I acknowledge that this license key is subject to the terms and conditions of the [Vuforia Developer Agreement](#).

Cancel

Confirm

## License Manager

Create a license key for your application.

Get Development Key

Buy Deployment Key

Name	Type	Status <span>▼</span>	Date Modified
<a href="#">Chapter5</a>	Develop	Active	Jun 18, 2018 02:22
<a href="#">VuforiaIntro</a>	Develop	Active	Dec 09, 2017 08:49

## Chapter5 [Edit Name](#) [Delete License Key](#)

License Key Usage

Please copy the license key below into your app

```
AXpzWXn/////AAABGSkYG9hm1E9ruo0qDlqRSQ5+9KOH7oh/cDkx  
1Ea/smSYQo/s/toTn6us87g/78OF15tgx8KFnGyNJCBlpvdSPtwG  
42CT1YSvJzcRE2+CsnYkHAYky7dGdOVL7WEKNL/fqJbGz+4joYW  
ITRDizcaRb62aaXBqggo6oopki1b8GANxbIYSEeOvR0KTF+3OSA  
ytuNd9Wbx4bLvDhgCs9Z8bS5UOVwAg2hXcpkP8+/spFs4v14p0bg  
i6ZrRAGHrpghMHqDlzmW7F46Znu4rdjAUEjf8NwO6w7NyjqJNen  
lx0v4gmne8Mxjz9H3qavkb6h4WKaboiKCSSzM930pu8fapHJzgWx  
hRzkaIW34EedYENp
```

**Type:** Develop

**Status:** Active

**Created:** Jun 18, 2018 02:22

**History:**

License Created - Today 02:22



## Target Manager

Use the Target Manager to create and manage databases and targets.

Add Database

Database	Type	Targets
----------	------	---------



Create your first Database

## Create Database

Name:

Type:

- Device
- Cloud
- VuMark

Cancel

Create

Target Manager > Words\_Pictures

## Words\_Pictures [Edit Name](#)

Type: Device

Targets (0)

Add Target

Download Database (All)

<input type="checkbox"/>	Target Name	Type	Rating	Status <span>▼</span>	Date Modified
--------------------------	-------------	------	--------	-----------------------	---------------

Home Pricing Downloads Library **Develop** Support

License Manager Target Manager

## Target Manager

Use the Target Manager to create and manage databases and targets.

Add Database

Database	Type	Targets	Date Modified
<a href="#">Words_Pictures</a>	Device	0	Jun 18, 2018 02:23

Target Manager > Words\_Pictures

## Words\_Pictures [Edit Name](#)

Type: Device

Targets (0)

Add Target Download Database (All)

<input type="checkbox"/> Target Name	Type	Rating	Status <span>▼</span>	Date Modified
--------------------------------------	------	--------	-----------------------	---------------

## Add Target

Type:



Single Image



Cuboid



Cylinder



3D Object

File:

Choose File

Browse...

.jpg or .png (max file 2mb)

Width:

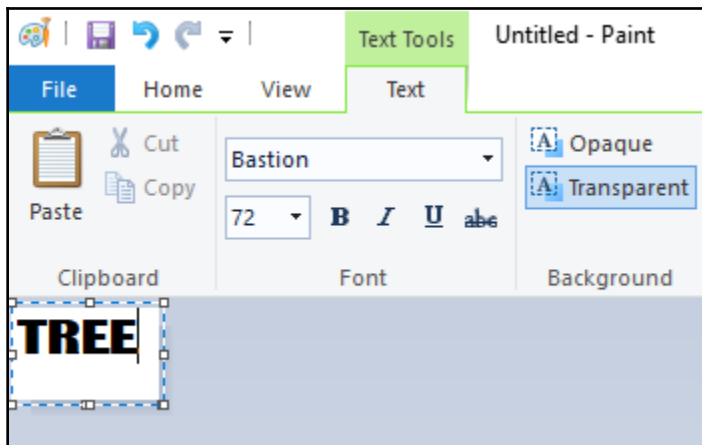
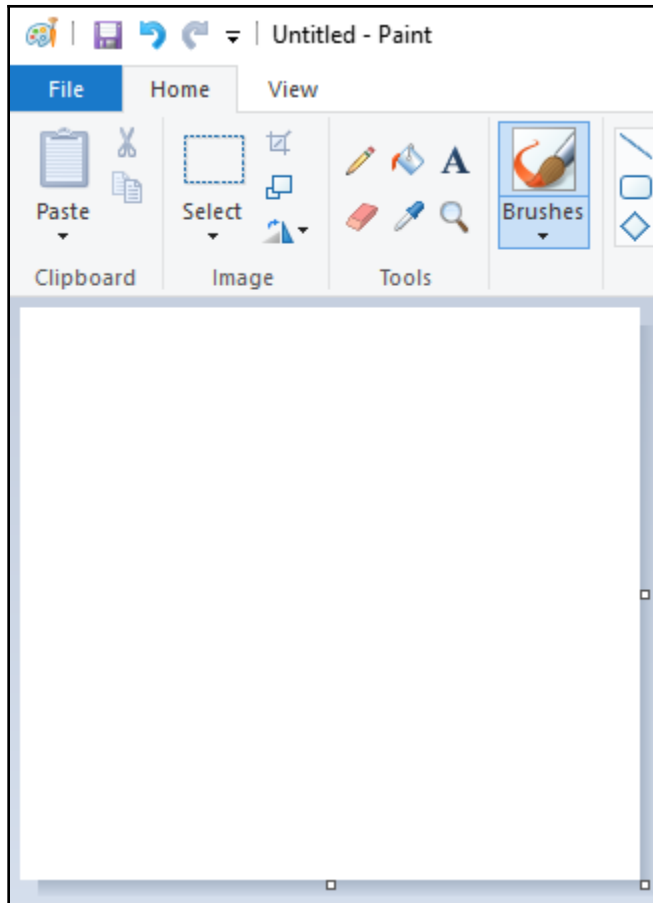
Enter the width of your target in scene units. The size of the target should be on the same scale as your augmented virtual content. Vuforia uses meters as the default unit scale. The target's height will be calculated when you upload your image.

Name:

Name must be unique to a database. When a target is detected in your application, this will be reported in the API.

Cancel

Add





## Add Target

Type:



Single Image



Cuboid



Cylinder



3D Object

File:

.jpg or .png (max file 2mb)

Width:

Enter the width of your target in scene units. The size of the target should be on the same scale as your augmented virtual content. Vuforia uses meters as the default unit scale. The target's height will be calculated when you upload your image.

Name:

Name must be unique to a database. When a target is detected in your application, this will be reported in the API.

## Add Target

### Type:



Single Image



Cuboid



Cylinder



3D Object

### File:

TreeWord.png

Browse...

.jpg or .png (max file 2mb)

### Width:

20

Enter the width of your target in scene units. The size of the target should be on the same scale as your augmented virtual content. Vuforia uses meters as the default unit scale. The target's height will be calculated when you upload your image.

### Name:

TreeWord

Name must be unique to a database. When a target is detected in your application, this will be reported in the API.

Cancel

Add

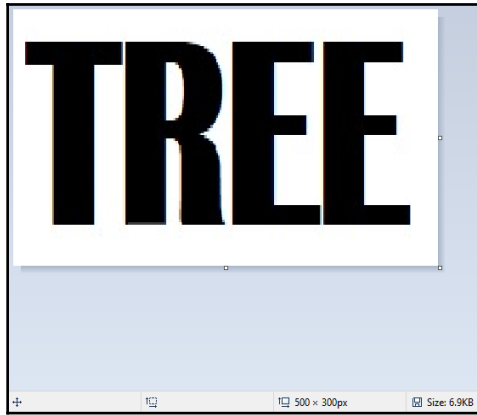
<input type="checkbox"/> Target Name	Type	Rating	Status ▾	Date Modified
<input type="checkbox"/> <b>TREE</b> Tree	Single Image	★★★★☆	Active	Jun 19, 2018 02:57



Target Name

1 selected [Delete](#)

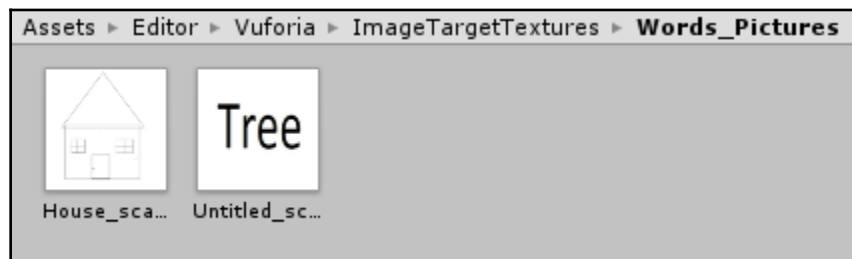
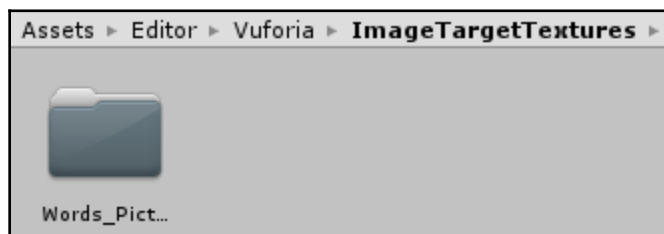
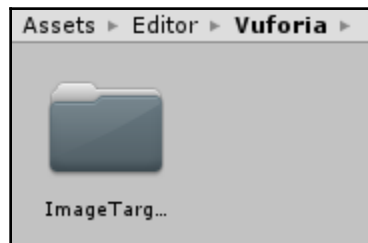
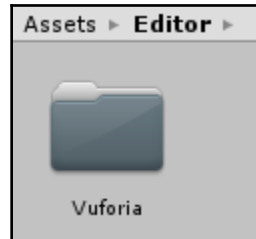
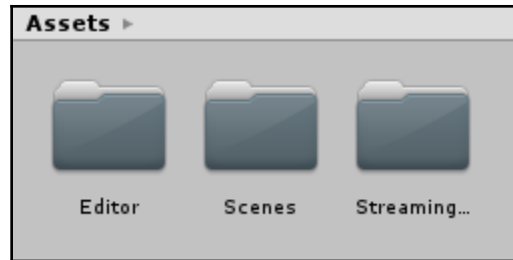
TREE Tree

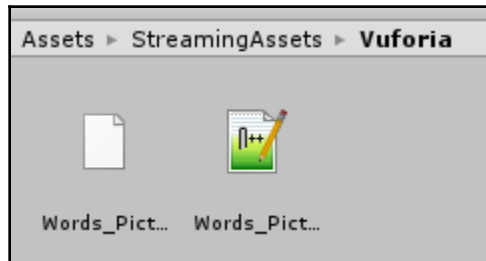
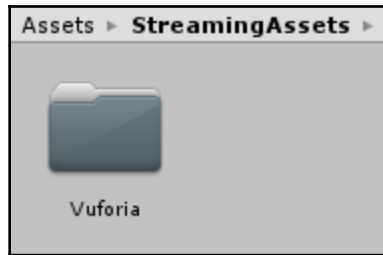
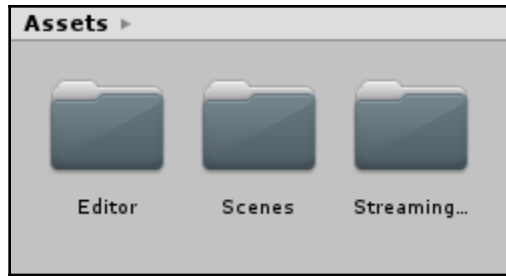


Tree [Untitled](#)    Single Image    ★★★★★    Active    Jun 18, 2018 02:38

[Download Database \(All\)](#)







# Tree


by TmStudio

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 **Tree** Free

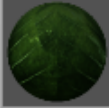







- [Tree\\_max2010\\_and\\_textures.rar](#) 3ds Max (version: 2010) - 4.59 MB
- [Tree\\_max2012\\_and\\_textures.rar](#) 3ds Max (version: 2012) - 4.59 MB
- [Tree\\_max2014\\_and\\_textures.rar](#) 3ds Max (version: 2014) - 4.66 MB
- [Tree\\_FBX.rar](#) Autodesk FBX (version: 2009) - 8.29 MB
- [Tree\\_OBJ.rar](#) OBJ - 6.83 MB
- [Tree\\_Mat\\_Library.rar](#) Other - 1 KB
- [Tree\\_textures.rar](#) Other - 806 KB

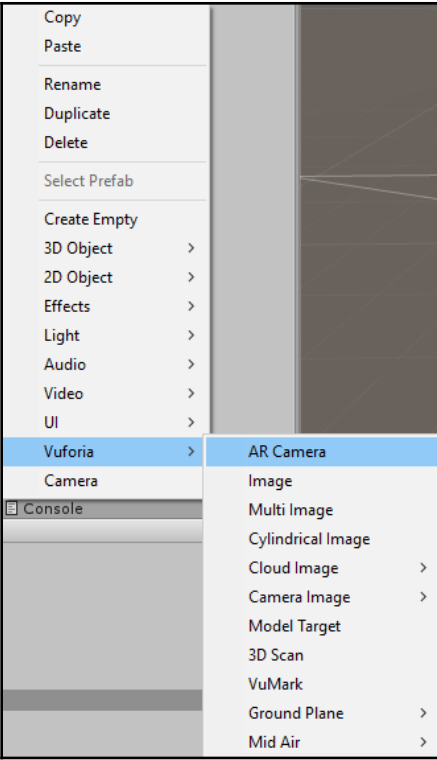
show fewer

**Assets** ▶

-  Editor
-  Models
-  Scenes
-  Streaming...

Assets ▶ Models ▶ **Tree**

-  leaf
-  leaf\_Bump
-  leaf\_Dif
-  leaf\_Spec
-  Tree\_FBX
-  trunk
-  Trunk
-  Trunk\_Bump



Inspector



ARCamera  Static

Tag Untagged Layer Default

**Transform**

Position X 0 Y 1 Z -10  
Rotation X 0 Y 0 Z 0  
Scale X 1 Y 1 Z 1

**Camera**

Clear Flags Solid Color  
Background   
Culling Mask Everything  
Projection Perspective  
Field of View  60  
Clipping Planes Near 0.05 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   
Allow HDR   
Allow MSAA   
Allow Dynamic Resolution   
Target Display Display 1

**Audio Listener**

**Vuforia Behaviour (Script)**  
[Download new Vuforia version: 7.1.35](#)  
World Center Mode FIRST\_TARGET  
Open Vuforia configuration

**Default Initialization Error Handler (Script)**  
Script DefaultInitializationErrorHandler

Add Component

## Vuforia 7.1 Software License



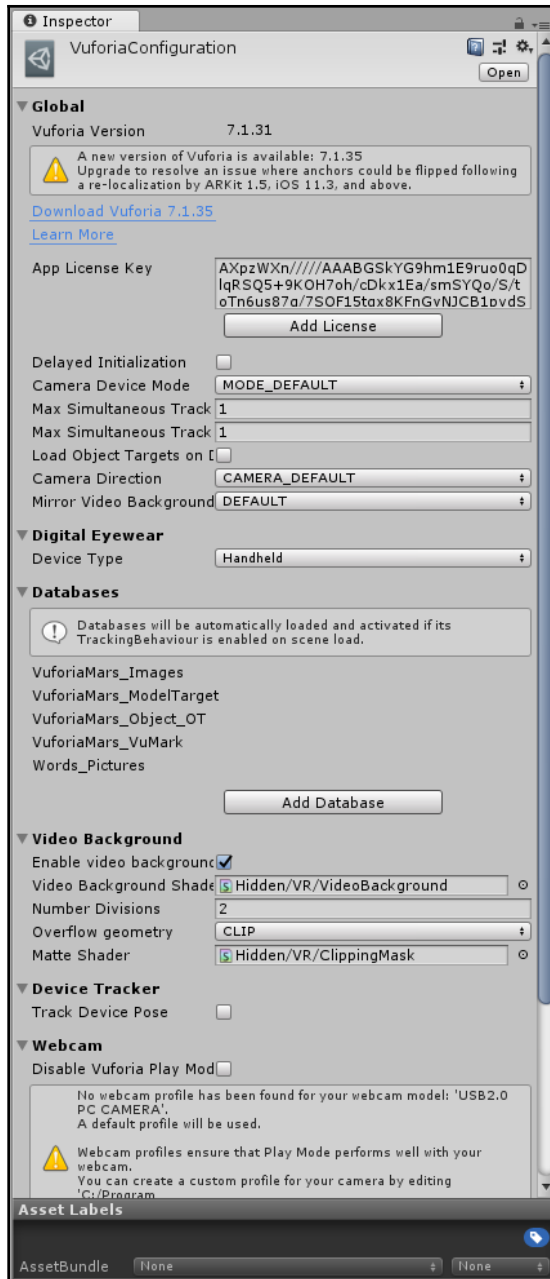
In order to continue downloading, you need to agree to the terms below.

Use of this Vuforia™ Software Development Kit or extension (the "Software") is subject in all respects to all of the terms and conditions of the Vuforia Developer Agreement, which can be found by clicking on "View in Browser" below. If you do not agree to all the terms and conditions of the Vuforia Developer Agreement, then you must not retain or in any manner use any of the Software.

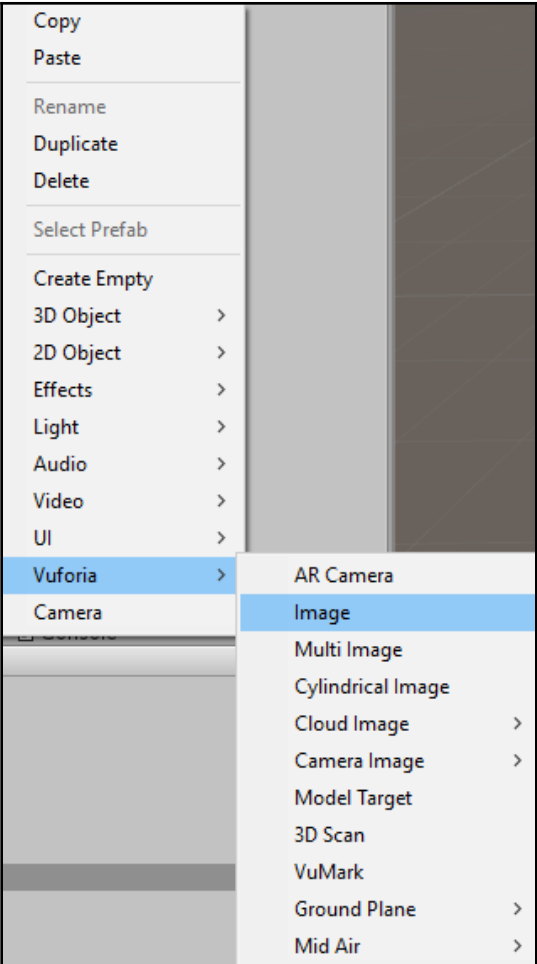
[View in Browser](#)

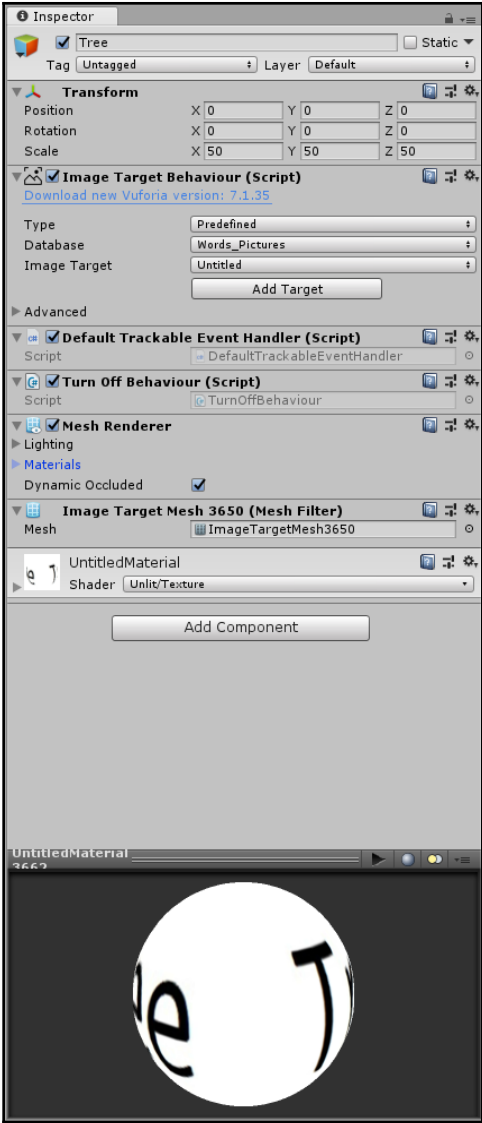
[Accept](#)

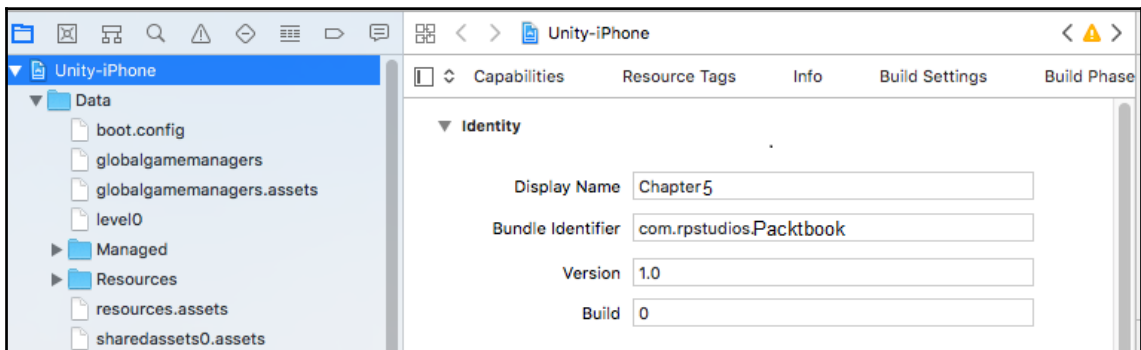
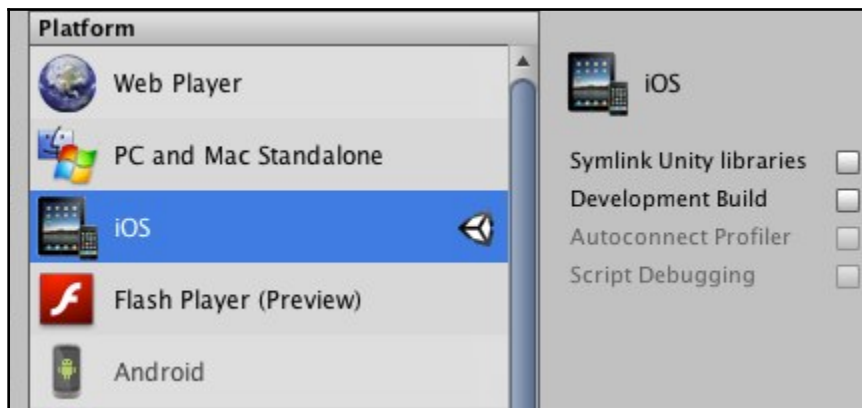
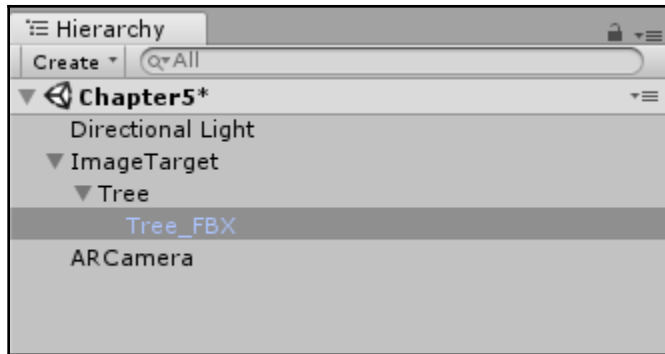
[Decline](#)











▼ Identity

Display Name

Bundle Identifier

Version

Build

▼ Signing

Automatically manage signing
























Xcode will create and update profiles, app IDs, and certificates.

Team

Provisioning Profile Xcode Managed Profile ⓘ

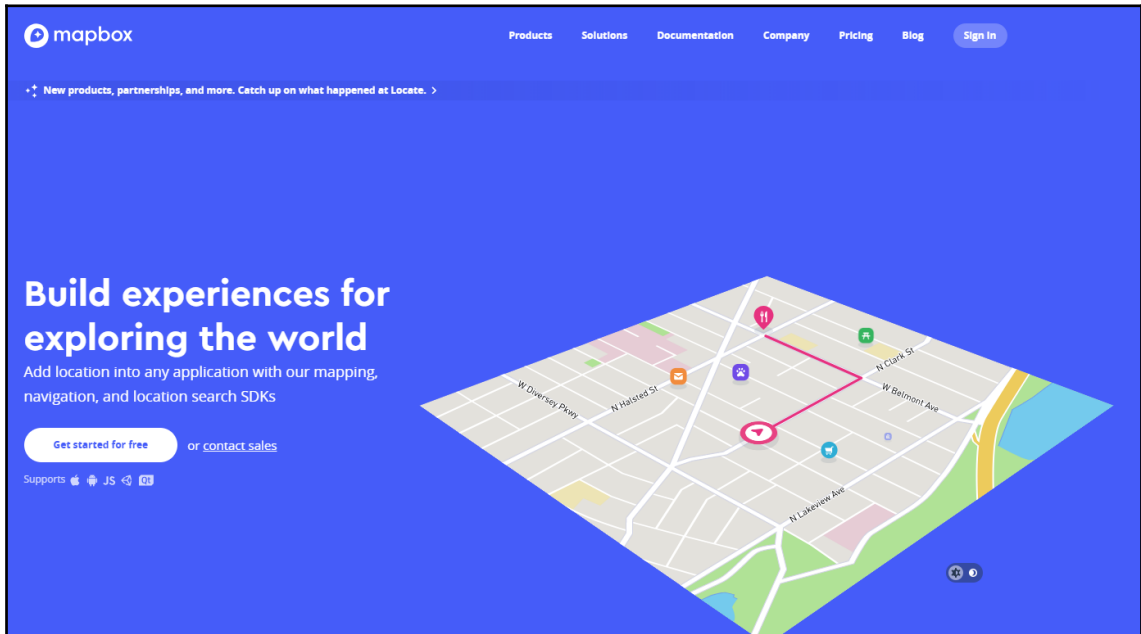
Signing Certificate iPhone Developer: jglover88@hotmail.com (7NAZ...

▼ **Linked Frameworks and Libraries**

Name	Status
 Security.framework	Required ⇅
 MediaToolbox.framework	Required ⇅
 libiPhone-lib.a	Required ⇅
 CoreText.framework	Required ⇅
 AudioToolbox.framework	Required ⇅
 AVFoundation.framework	Optional ⇅
 CFNetwork.framework	Required ⇅
 CoreGraphics.framework	Required ⇅
 CoreLocation.framework	Required ⇅
 CoreMedia.framework	Required ⇅
 CoreMotion.framework	Optional ⇅
 CoreVideo.framework	Required ⇅
 Foundation.framework	Required ⇅
 MediaPlayer.framework	Required ⇅
 OpenAL.framework	Required ⇅
 OpenGL.framework	Required ⇅
 QuartzCore.framework	Required ⇅
 SystemConfiguration.framework	Required ⇅
 UIKit.framework	Required ⇅
 libconv.2.dylib	Required ⇅
 libil2cpp.a	Required ⇅
 Metal.framework	Optional ⇅
 ARKit.framework	Required ⇅

▼ Architectures	Setting	Unity-iPhone
▶ Architectures		Standard ↕
▶ Base SDK		Latest iOS (iO... ↕
▼ Build Active Architecture Only		<Multiple valu... ↕
	Debug	Yes ↕
	Release	No ↕
	ReleaseForProfiling	Yes ↕
	ReleaseForRunning	Yes ↕
Supported Platforms		iphoneos ↕

# Chapter 6: Fitness for Fun - Tourism and Random Walking



## Sign up

**Username**

**Email**

**Password**

[Get started](#)

You agree to the [Mapbox Terms of Service](#) and [Privacy Policy](#).

Already have an account? [Sign in to Mapbox >](#)



# Add Mapbox to your app or website

## Install the Maps SDK

Install beautiful interactive maps in your app or website.



iOS



Android

JS

Web



Unity

## Get your access token

Just looking for your [access token](#)?  
Here it is!

pk.eyJ1IjoicnBkZXZqZXNjbyIsImEiOiJjam1xO...



## Design a map style

Design a [map style](#) with your own data and visual appearance.

[Design a map style →](#)




## Download Maps SDK for Unity

Start by clicking the download link below, then go to [Assets](#) > [Import Package](#) > [Custom Package](#), then select the package file to import. Please note that Unity 2017.1.0 or greater is required to install the Mapbox Maps SDK for Unity.

[mapbox-unity-sdk\\_v1.4.3.unitypackage](#)

[Next >](#)



### Set your access token

Maps SDK for Unity adds a *Mapbox* menu item to Unity. From this menu, select the *Setup* item. In the dialog that opens, paste your Mapbox access token.

```
pk.eyJ1Ijoicn8kZXZqZXNjbyIsImEiOiJjam1xOHl  
mwxNWFjM3FyenYza21peGV5In0.ENB0cUP-kLSR7Xu  
PqjT3Pg
```

[Next >](#)

Projects Learn Installs New Open Settings My account

On Disk **Chapter6** ...

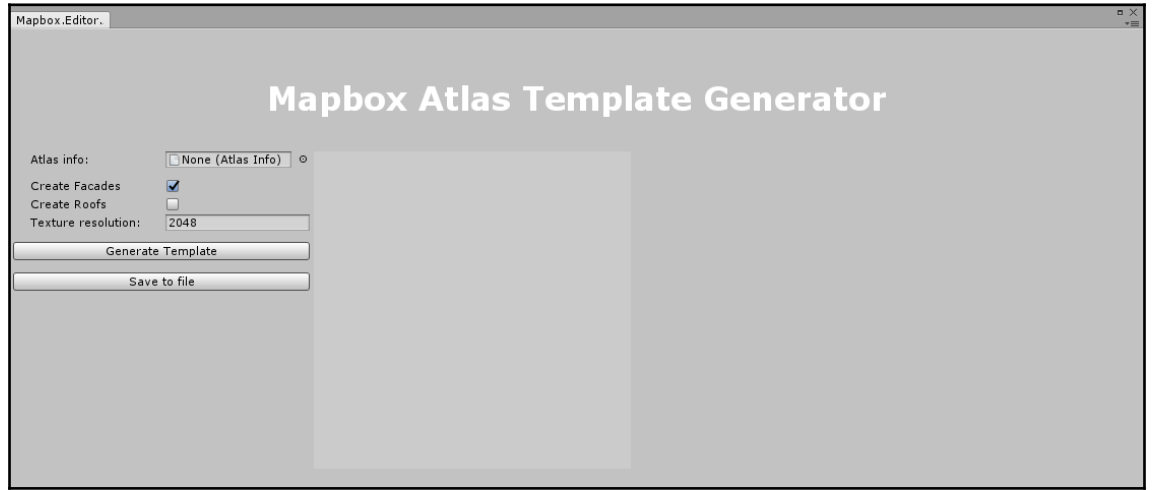
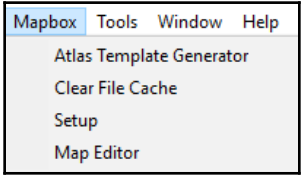
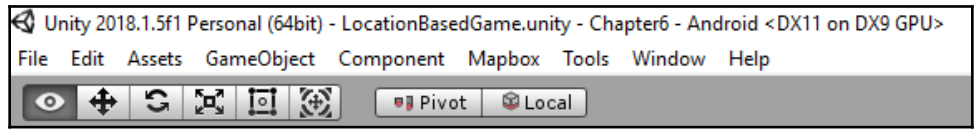
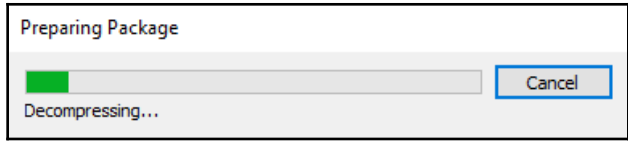
In the Cloud **1**

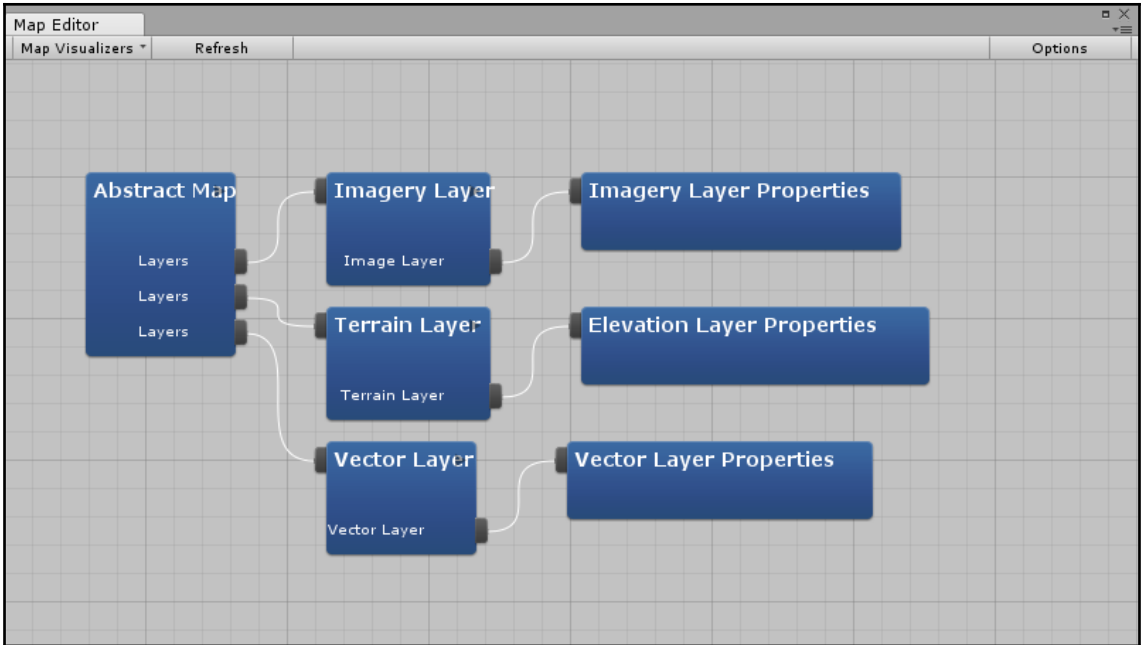
Path: C:\Users\jglov\Desktop\Unity3D AR Programming blueprints\Chapter Projects\Chapter6 | Unity version: 2018.1.5f1

### Import Unity Package

**mapbox-unity-sdk\_v1.4.3**

- GoogleARCore NEW
- Configurations NEW
  - DefaultSessionConfig.asset NEW
- Examples NEW
  - ComputerVision NEW
    - Materials NEW
      - AREdgeDetectionBackground.shader NEW
      - AREdgeDetectionBackgroundMaterial NEW
    - Plugins NEW
      - libarcore\_camera\_utility.so NEW
    - src NEW
      - arcore\_camera\_utility.zip NEW
      - README.md NEW
  - Scenes NEW
    - ComputerVision.unity NEW
  - Scripts NEW





The image displays a Unity development environment with two main windows: the Map Editor and the Inspector.

**Map Editor:** This window shows a hierarchical diagram of map components. On the left, an **Abstract Map** node has three sub-nodes labeled **Layers**. These connect to three main layer types: **Imagery Layer**, **Terrain Layer**, and **Vector Layer**. Each layer type has a corresponding **Properties** node: **Imagery Layer Properties**, **Elevation Layer Properties**, and **Vector Layer Properties**. The Imagery Layer and Terrain Layer nodes each have two sub-nodes labeled **Image Layer** and **Terrain Layer** respectively. The Vector Layer node has two sub-nodes labeled **Vector Layer**.

**Inspector:** This window shows the configuration for the **AbstractMap** script. The settings are organized into several sections:

- GENERAL**
  - Location:** Latitude Longitude: 36.7184, Search; Zoom: 16
  - Extent Options:** Camera Bounds
  - Camera:** None (Camera)
  - Update Interval:** 0
  - Initialize On Start:**
  - Others:** Placement Options: At Location Center; Snap Map To Zero: ; Scaling Options: Custom; Unity Tile Size: 100; Loading Texture: loadinggrid
- IMAGE**
  - Data Source:** Mapbox Streets
  - Map Id:** mapbox://styles/r
  - Use Retina:**
  - Use Compression:**
  - Use Mip Map:**
- TERRAIN**
  - Data Source:** Mapbox Terrain
  - Map Id:** mapbox.terrain-rgb
  - Elevation Layer Type:** Flat Terrain
  - Base Material:** TerrainMaterial
  - Exaggeration Factor:** 1
  - Add Collider:**
- MAP LAYERS**
  - Data Source:** Mapbox Streets
  - Map Id:** mapbox.mapbox-stre
  - Use Optimized Style:**
  - Enable Coroutines:** ; Entity Per Corouti: 20
- POINTS OF INTEREST**
- FEATURES**
  - Initialize Map With Loc:** ; Script: InitializeMapWithL; Map: Map (AbstractMap)





Mapbox Setup

**Access Token**  
Copy your free token from [mapbox.com](https://mapbox.com)

► Configuration  
[v1.4.3 changelog](#)

Map Prefabs **Paste your mapbox access token to get started**

Choose a starting scene to see each location-based prefab in action, or go to the prefabs folder and add them to your existing scene.

 Location Based Game	 City Simulator	 TabletopAR	 WorldScaleAR
--	---	---	--

▼ MAP LAYERS

Data Source

Map Id

Use Optimized Style

Enable Coroutines

Entity Per Corouti

**Inspector**

Map  Static

Tag: Untagged Layer: Default

Prefab: Select Revert Apply

**Transform**

Position: X 0 Y 0 Z 0  
Rotation: X 0 Y 0 Z 0  
Scale: X 1 Y 1 Z 1

**Abstract Map (Script)**

**GENERAL**

Location

Latitude Longitude: 37.784179, -122.401583 Search

Zoom: 16

Extent Options: Camera Bounds

Camera: None (Camera)

Update Interval: 0

Initialize On Start:

**Others**

Placement Options: At Location Center

Snap Map To Zero:

Scaling Options: Custom

Unity Tile Size: 100

Loading Texture: loadinggrid

**IMAGE**

Data Source: Mapbox Streets

Map Id: mapbox://styles/mapbox/streets-v10

Use Retina:

Use Compression:

Use Mip Map:

**TERRAIN**

Data Source: Mapbox Terrain

Map Id: mapbox.terrain-rgb

Elevation Layer Type: Flat Terrain

Base Material: TerrainMaterial

Exaggeration Factor: 1

material used for rendering terrain tiles.

**Others**

**MAP LAYERS**

Data Source: Mapbox Streets

Map Id: mapbox.mapbox-streets-v7

Use Optimized Style:

Enable Coroutines:

Entity Per Coroutine: 20

**POINTS OF INTEREST**

**FEATURES**

▼ GENERAL

Location

**Latitude Longitude**

Zoom

Extent Options

Camera

Update Interval

Initialize On Start

▼ Others

Placement Options

Snap Map To Zero

Scaling Options

Unity Tile Size

Loading Texture

▼ IMAGE

Data Source

Map Id

Source tileset for Imagery.

Use Keuma

Use Compression

Use Mip Map

▼ TERRAIN

Data Source

Map Id

Elevation Layer Type

Base Material

Exaggeration Factor

Add Collider

▼ Others

Sample Count

Use Relative Height

Earth Radius

Show Sidewalls

Add to Unity layer

▼ MAP LAYERS

Data Source

Map Id

Use Optimized Style

Enable Coroutines

Entity Per Coroutine



▼ POINTS OF INTEREST




Required Map Id

Select a visualizer to see properties

▼ FEATURES

Vector Layer Visualizers





Select a visualizer to see properties

▼  **Initialize Map With Location Pro**   

Script

Map

Assets ▶ **Scenes** ▶

-  Materials
-  Prefabs
-  Scripts
-  FitnessForFun


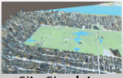


Mapbox Setup

**Access Token**  
Manage your tokens at [mapbox.com/studio/accounts/tokens/](https://mapbox.com/studio/accounts/tokens/)


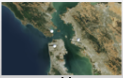
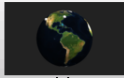



`pk.eyJ1IjoicmBkZkZqZXNjbysImEiOiJjamx0OHF0cmwxNWFlM3FyenYza21peGV5In0.ENBDcUP-kLSR7XuqgJT3Pg`

► Configuration  
[v1.4.3 changelog](#)

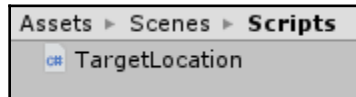
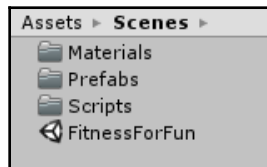
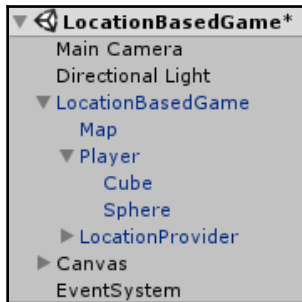
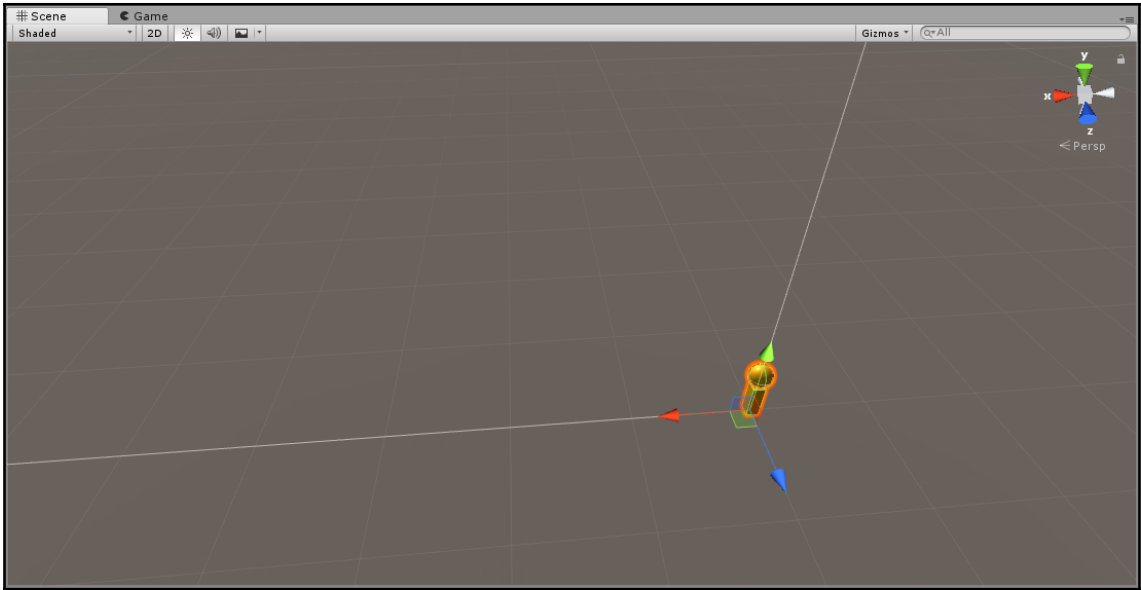
**Map Prefabs**  
Choose a starting scene to see each location-based prefab in action, or go to the prefabs folder and add them to your existing scene.

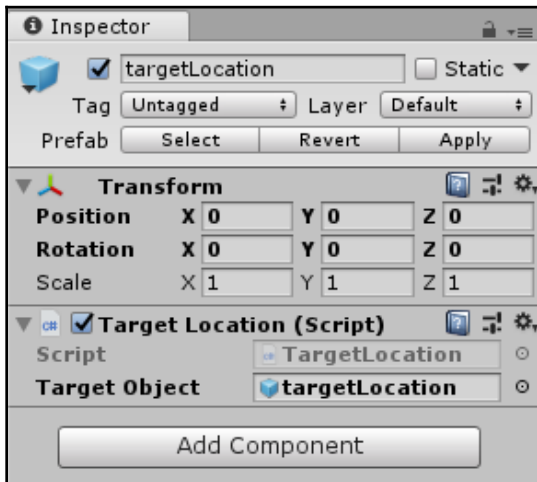
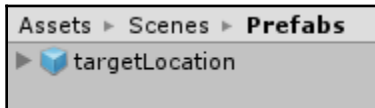
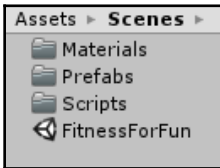
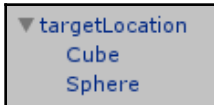
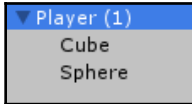
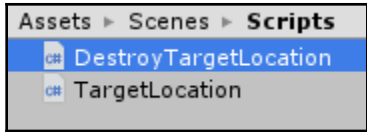
 <b>Location Based Game</b>	 <b>City Simulator</b>	 <b>TabletopAR</b>	 <b>WorldScaleAR</b>
---	--	--	--

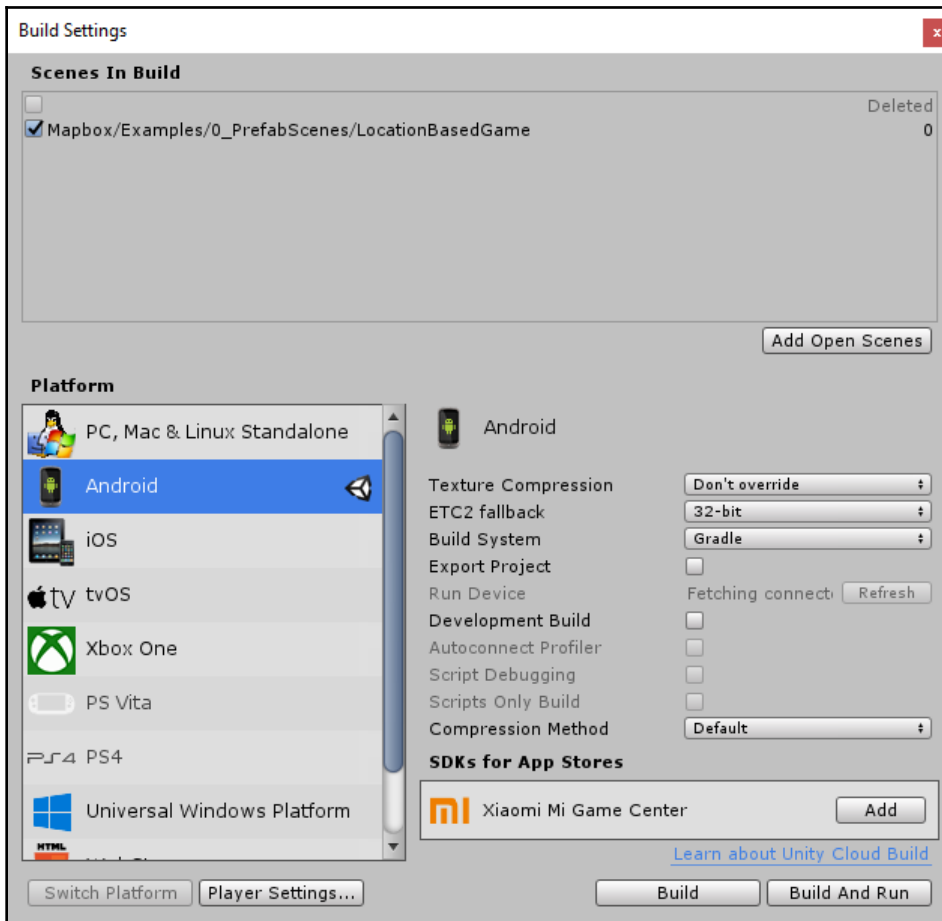
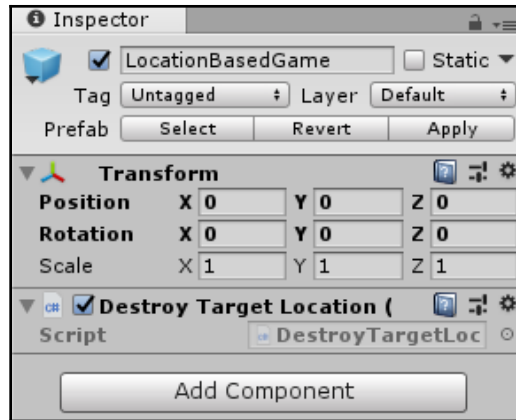
**Example Scenes**

 <b>DataExplorer</b>	 <b>ZoomableMap</b>	 <b>Globe</b>	 <b>VoxelMap</b>
 <b>POIPlacement</b>	 <b>ReplaceFeatures</b>		





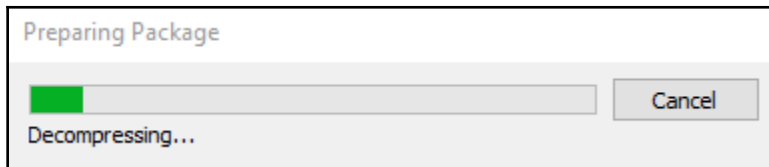
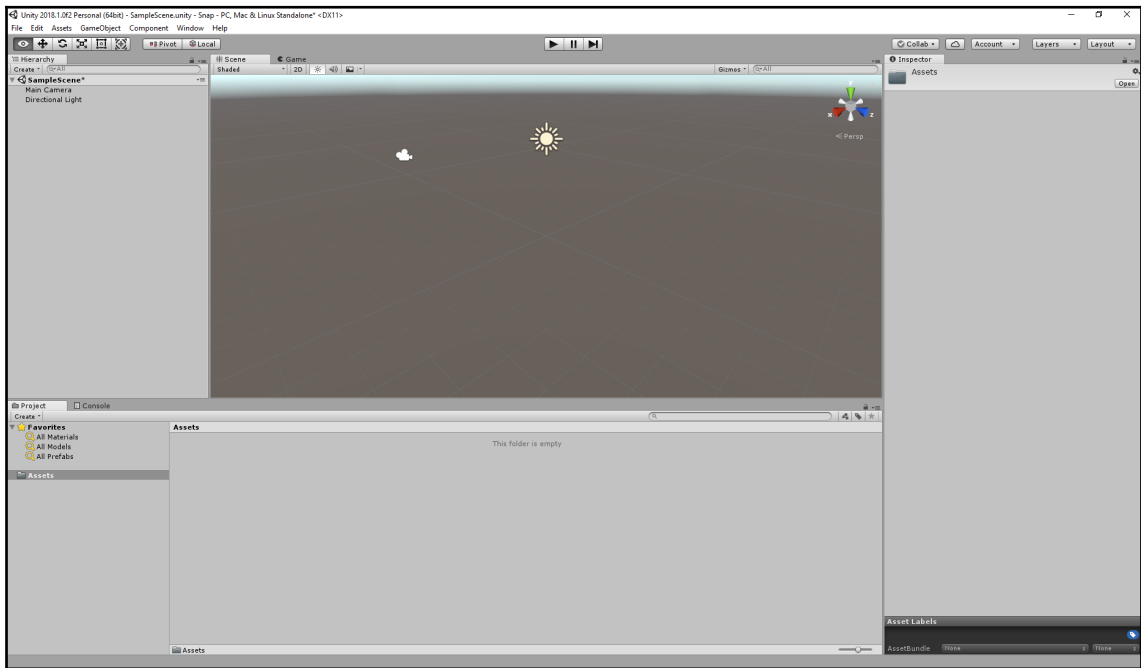
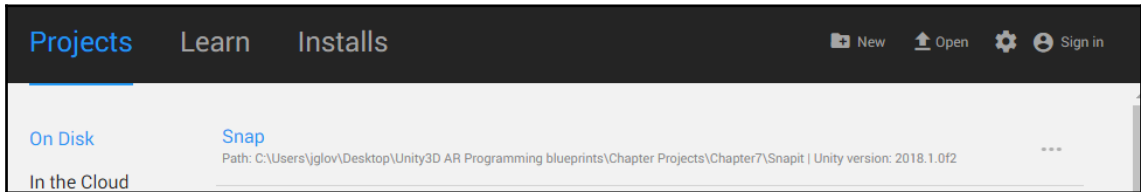


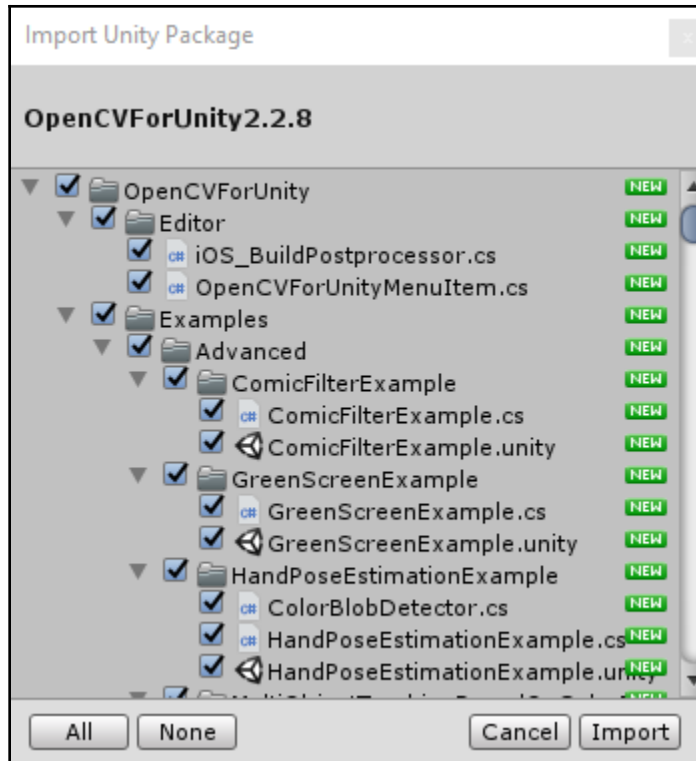




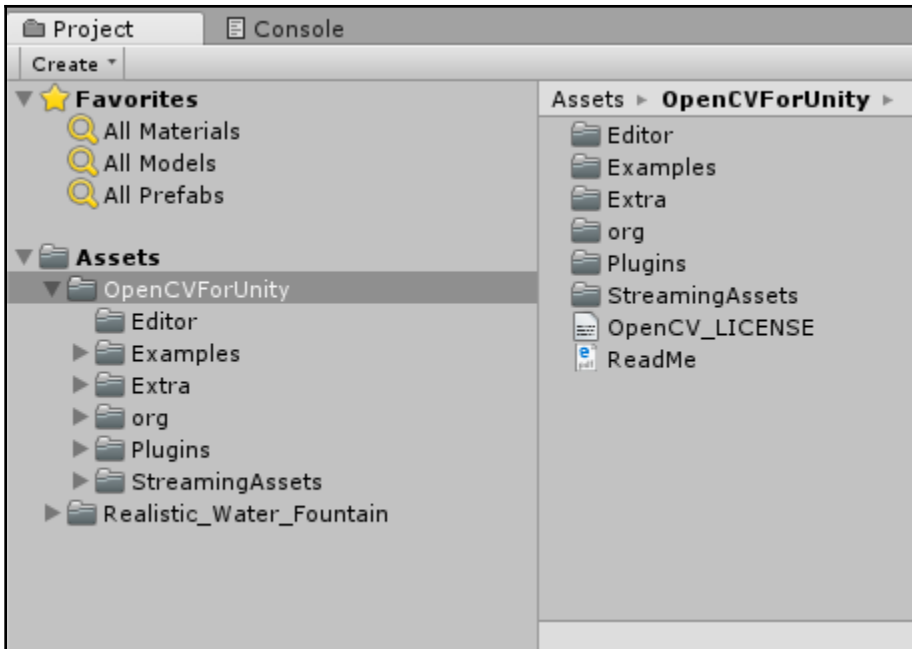
Scenes In Build	
<input type="checkbox"/>	Deleted
<input checked="" type="checkbox"/>	Mapbox/Examples/0_PrefabScenes/LocationBasedGame 0

# Chapter 7: Snap it! Adding Filters to Pictures










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# OpenCV



Open Source Computer Vision Library  
Brought to you by: [akamaev](#), [alalek](#), [ashishkov](#), [asmorkalov](#), and 7 others

★★★★★ 138 Reviews      Downloads: 35,103 This Week      Last Update: 2018-04-27














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 opencv-3.4.1-vc14\_vc15.exe (180.2 MB)


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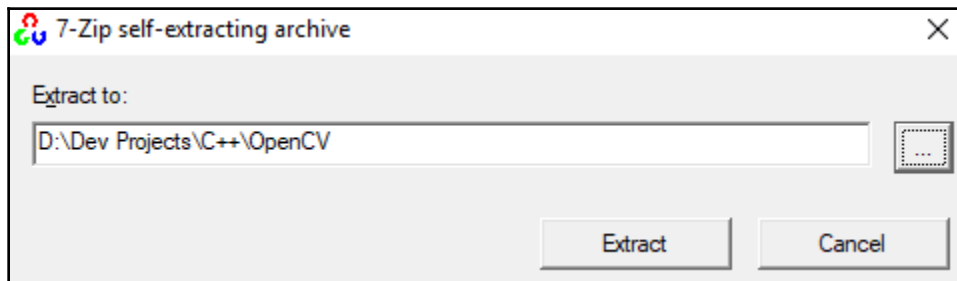
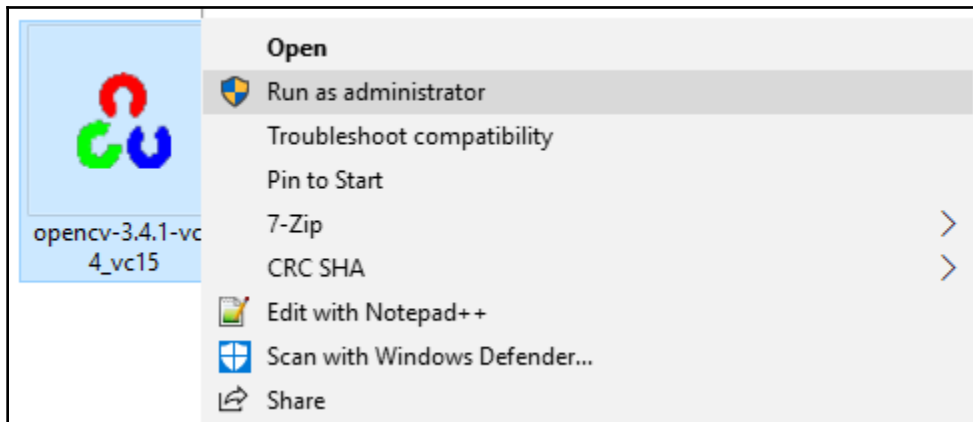
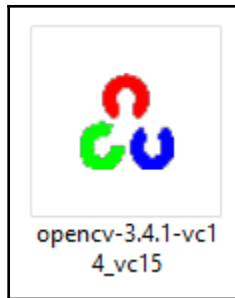
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 Parent folder			
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3.4.1	2018-02-26		16,896 
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3.3.1	2017-10-24		264 
3.3.0	2017-08-04		794 
3.2.0	2016-12-23		955 
2.4.12	2016-03-01		114 
3.1.0	2015-12-18		885 
3.0.0	2015-06-04		826 
3.0.0-rc1	2015-04-24		31 
2.4.11	2015-02-26		278 
3.0.0-beta	2014-11-10		22 



**opencv-3.4.1-vc14....exe**  
 27.5/172 MB, 1 hour left

> Data (D:) > Dev Projects > C++ >

Name

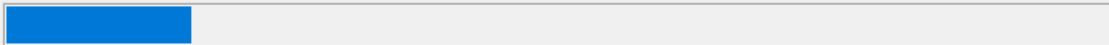
 OpenCV



 16% Extracting



Elapsed time:	00:00:03	Total size:	758 MB
Remaining time:	00:00:14	Speed:	42 MB/s
Files:	0	Processed:	127 MB
Compression ratio:		Compressed size:	



## Latest Release (3.11.4)

The release was packaged with CPack which is included as part of the release. The .sh files are self extracting gzipped tar files. To install a .sh file, run it with /bin/sh and follow the directions. The OS-machine.tar.gz files are gzipped tar files of the install tree. The OS-machine.tar.Z files are compressed tar files of the install tree. The tar file distributions can be untared in any directory. They are prefixed by the version of CMake. For example, the Linux-x86\_64 tar file is all under the directory cmake-Linux-x86\_64. This prefix can be removed as long as the share, bin, man and doc directories are moved relative to each other. To build the source distributions, unpack them with zip or tar and follow the instructions in Readme.txt at the top of the source tree. See also the [CMake 3.11 Release Notes](#). Source distributions:

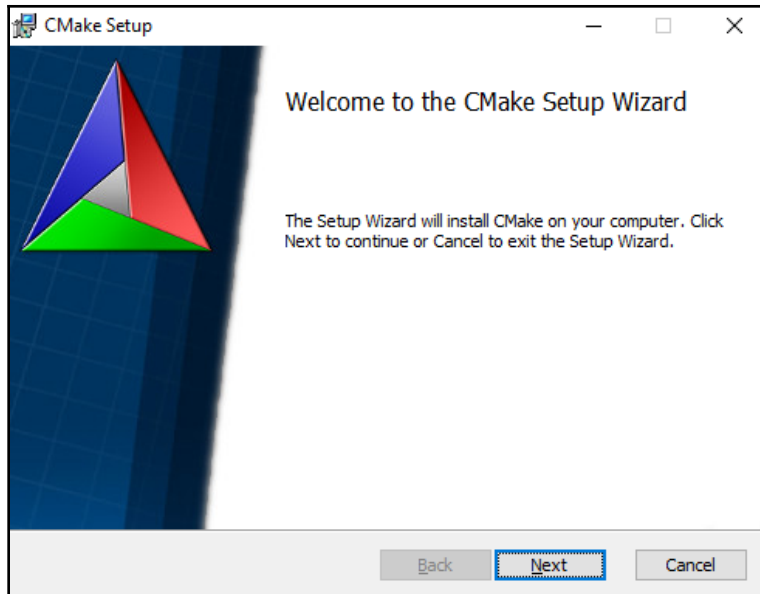
Platform	Files
Unix/Linux Source (has \n line feeds)	<a href="#">cmake-3.11.4.tar.gz</a>
	<a href="#">cmake-3.11.4.tar.Z</a>
Windows Source (has \r\n line feeds)	<a href="#">cmake-3.11.4.zip</a>

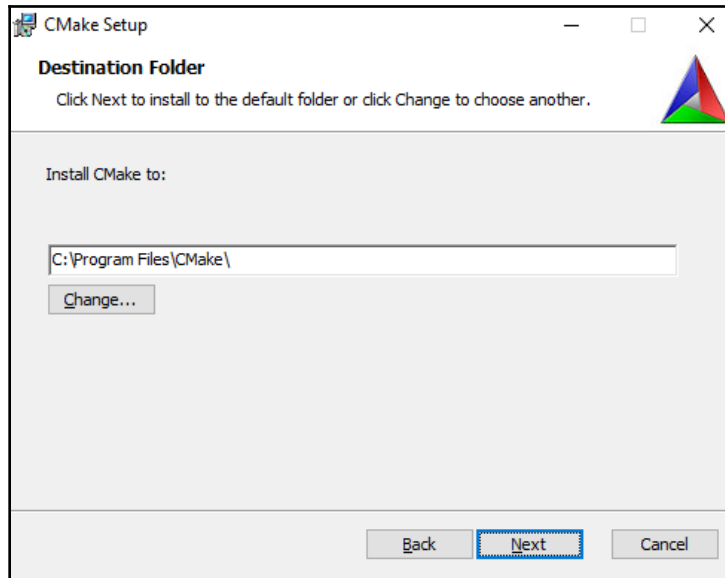
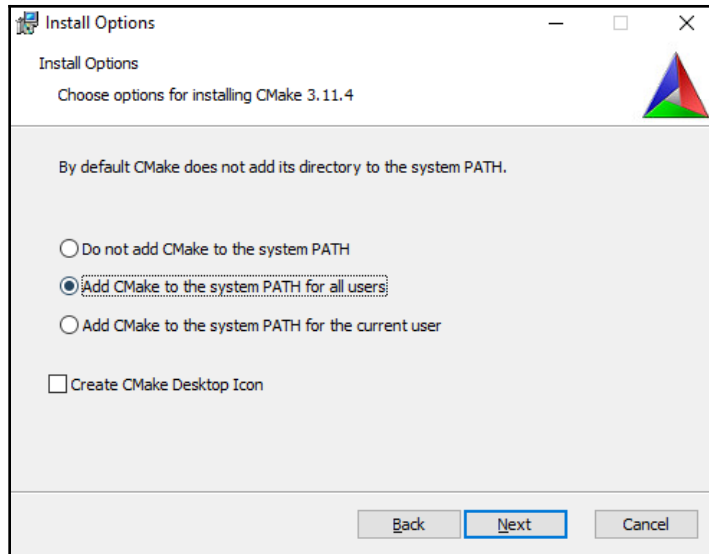
Binary distributions:

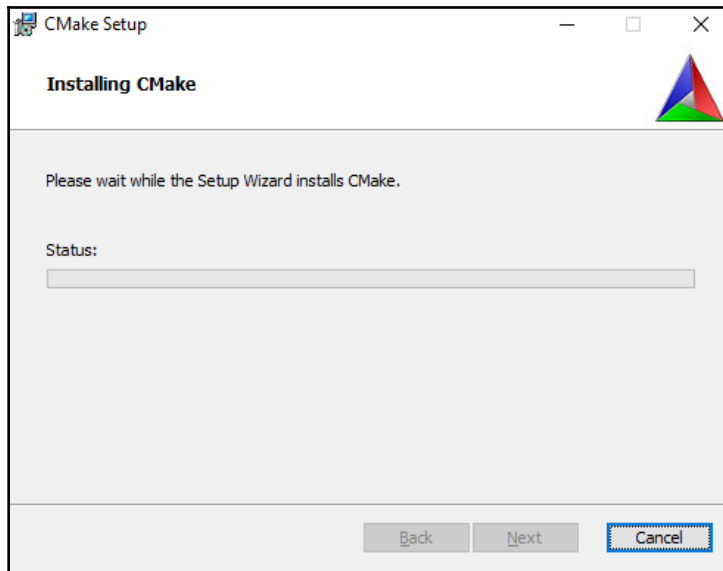
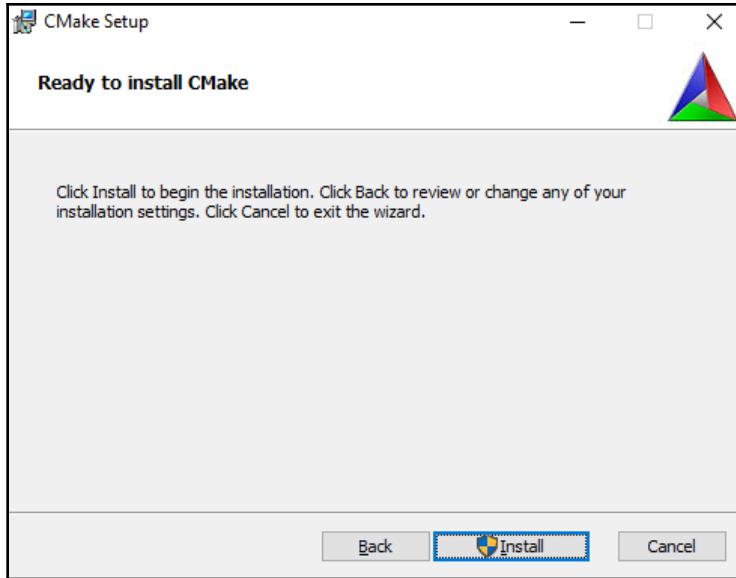
Platform	Files
Windows win64-x64 Installer: <b>Installer tool has changed. Uninstall CMake 3.4 or lower first!</b>	<a href="#">cmake-3.11.4-win64-x64.msi</a>
Windows win64-x64 ZIP	<a href="#">cmake-3.11.4-win64-x64.zip</a>
Windows win32-x86 Installer: <b>Installer tool has changed. Uninstall CMake 3.4 or lower first!</b>	<a href="#">cmake-3.11.4-win32-x86.msi</a>
Windows win32-x86 ZIP	<a href="#">cmake-3.11.4-win32-x86.zip</a>
Mac OS X 10.7 or later	<a href="#">cmake-3.11.4-Darwin-x86_64.dmg</a>
	<a href="#">cmake-3.11.4-Darwin-x86_64.tar.gz</a>
Linux x86_64	<a href="#">cmake-3.11.4-Linux-x86_64.sh</a>
	<a href="#">cmake-3.11.4-Linux-x86_64.tar.gz</a>

Download verification:

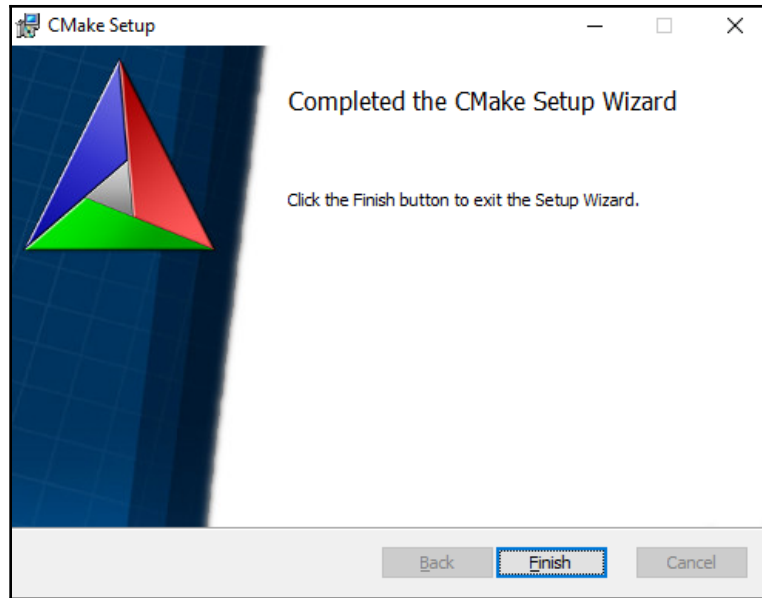
Role	Files
Cryptographic Hashes	<a href="#">cmake-3.11.4-SHA-256.txt</a>
	<a href="#">cmake-3.11.4-SHA-256.txt.asc</a>






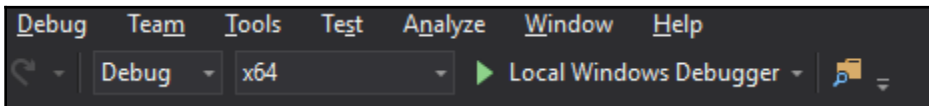
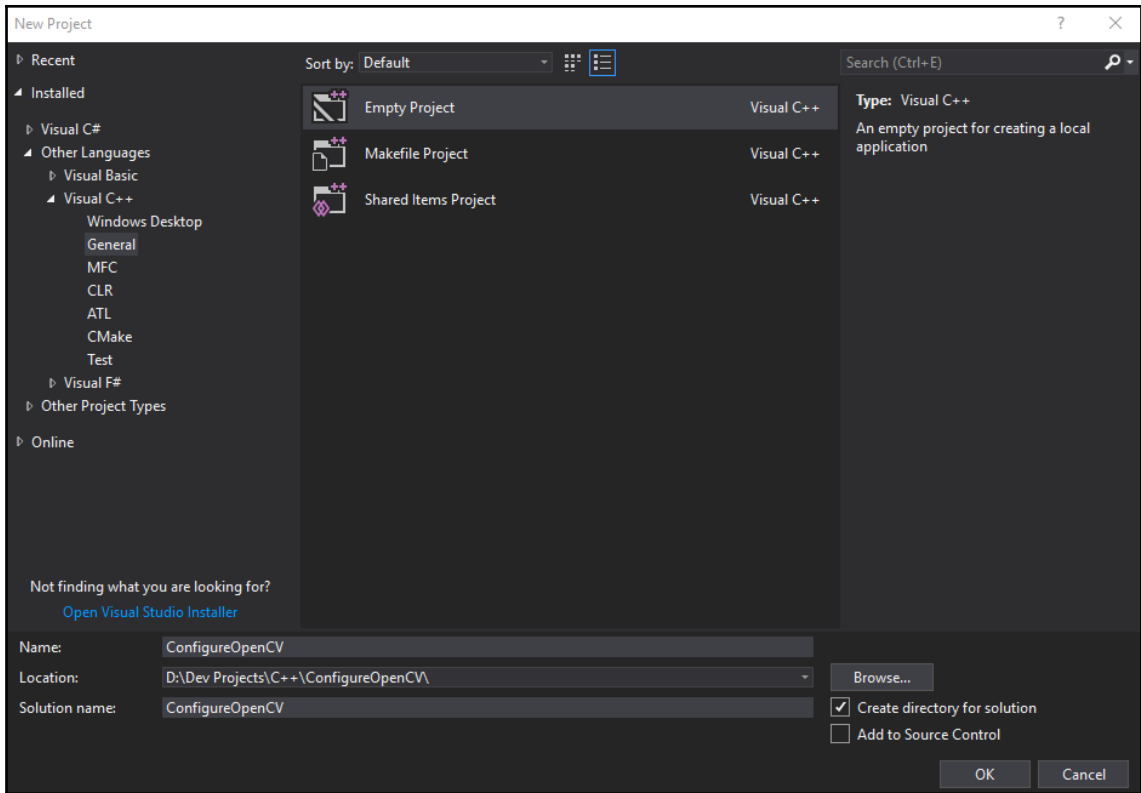






> Data (D:) > Dev Projects > C++ >

Name	Date modified	Type
 ConfigureOpenCV	6/27/2018 6:05 AM	File folder



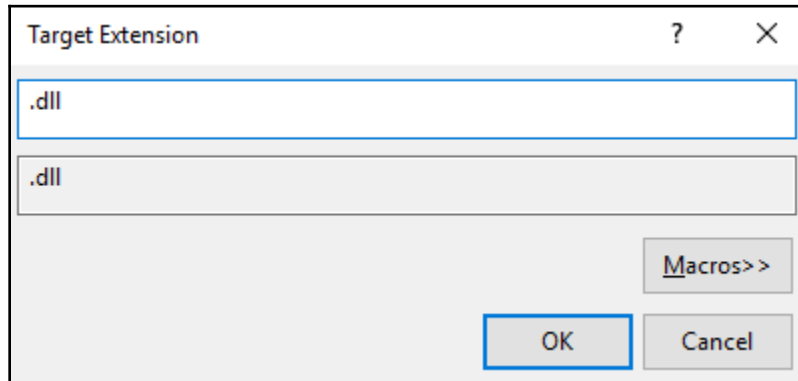
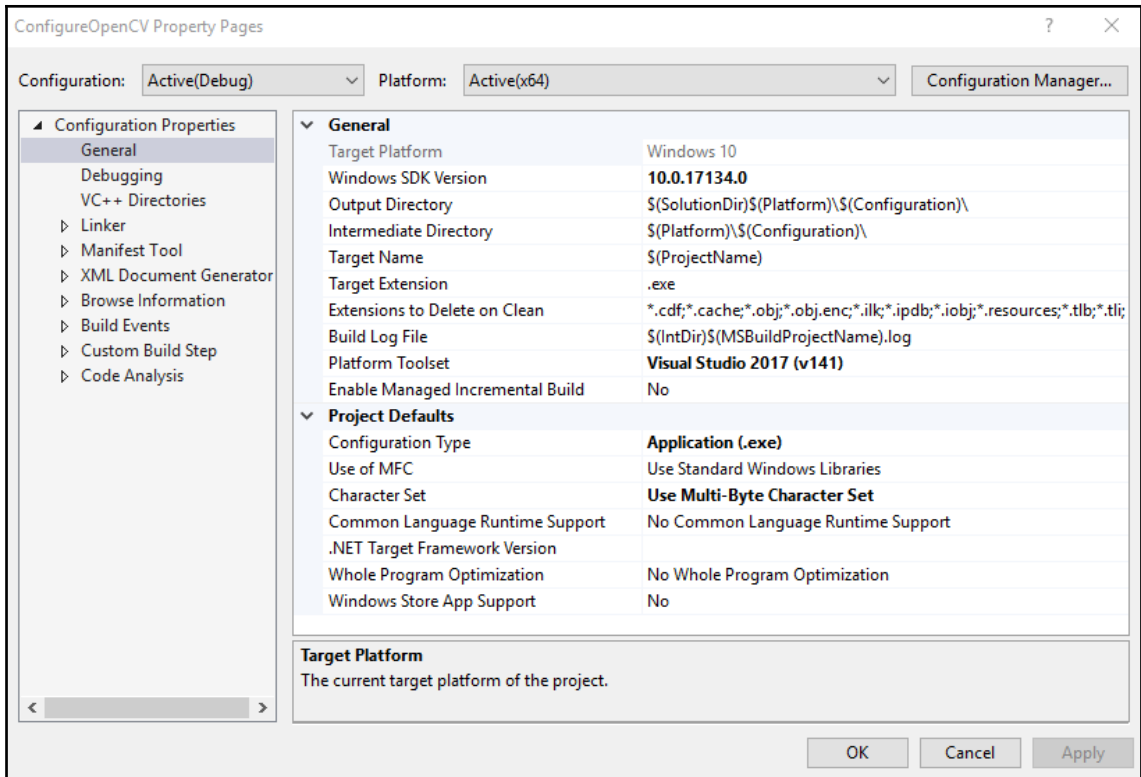
- Build
  - Rebuild
  - Clean
  - View
  - Analyze
  - Project Only
  - Retarget Projects
  - Scope to This
- New Solution Explorer View
- Build Dependencies
- Add
- Class Wizard... Ctrl+Shift+X
- Manage NuGet Packages...
- Set as StartUp Project
- Debug
- Source Control
- Cut Ctrl+X
- Paste Ctrl+V
- Remove Del
- Rename
- Unload Project
- Rescan Solution
- Display Tag Parser Errors
- Clear Tag Parser Errors
- Open Folder in File Explorer
- Properties Alt+Enter

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'ConfigureOpenCV' (1 project)

- ConfigureOpenCV
  - References
  - External Dependencies
  - Header Files
  - Resource Files
  - Source Files
    - OpenCVFile.cpp



<b>General</b>	
Target Platform	Windows 10
Windows SDK Version	<b>10.0.17134.0</b>
Output Directory	\$(SolutionDir)\\$(Platform)\\$(Configuration)\
Intermediate Directory	\$(Platform)\\$(Configuration)\
Target Name	\$(ProjectName)
Target Extension	.dll
Extensions to Delete on Clean	*.cdf;*.cache;*.obj;*.obj.enc;*.ilk;*.ipdb;*.iobj;*.resources;*.tlb;
Build Log File	\$(IntDir)\\$(MSBuildProjectName).log
Platform Toolset	<b>Visual Studio 2017 (v141)</b>
Enable Managed Incremental Build	No
<b>Project Defaults</b>	
<b>Configuration Type</b>	<b>Dynamic Library (.dll)</b>
Use of MFC	Use Standard Windows Libraries
Character Set	<b>Use Multi-Byte Character Set</b>
Common Language Runtime Support	No Common Language Runtime Support
.NET Target Framework Version	
Whole Program Optimization	No Whole Program Optimization
Windows Store App Support	No

ConfigureOpenCV Property Pages

Configuration: Active(Debug) Platform: Active(x64) Configuration Manager...

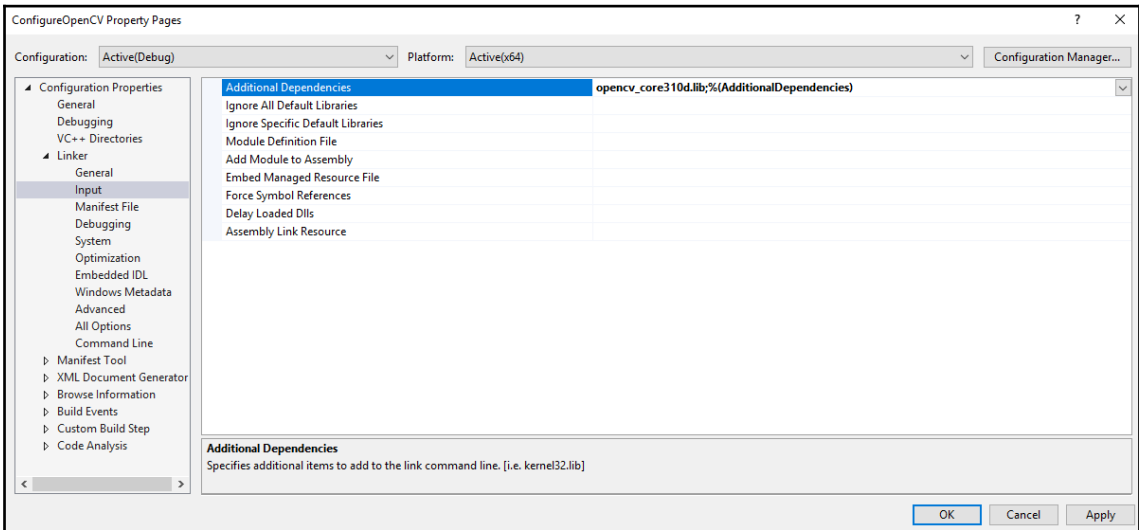
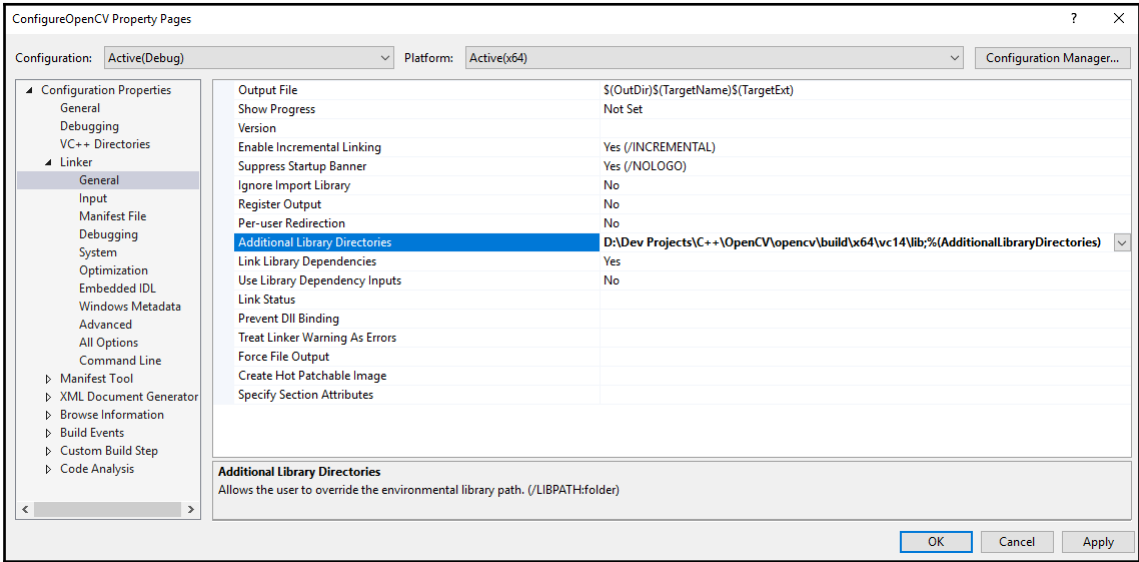
- Configuration Properties
  - General
  - Debugging
  - VC++ Directories**
  - Linker
    - General
    - Input
    - Manifest File
    - Debugging
    - System
    - Optimization
    - Embedded IDL
    - Windows Metadata
    - Advanced
    - All Options
    - Command Line
  - Manifest Tool
    - General
    - Input and Output
    - Isolated COM
    - Advanced
    - All Options
    - Command Line

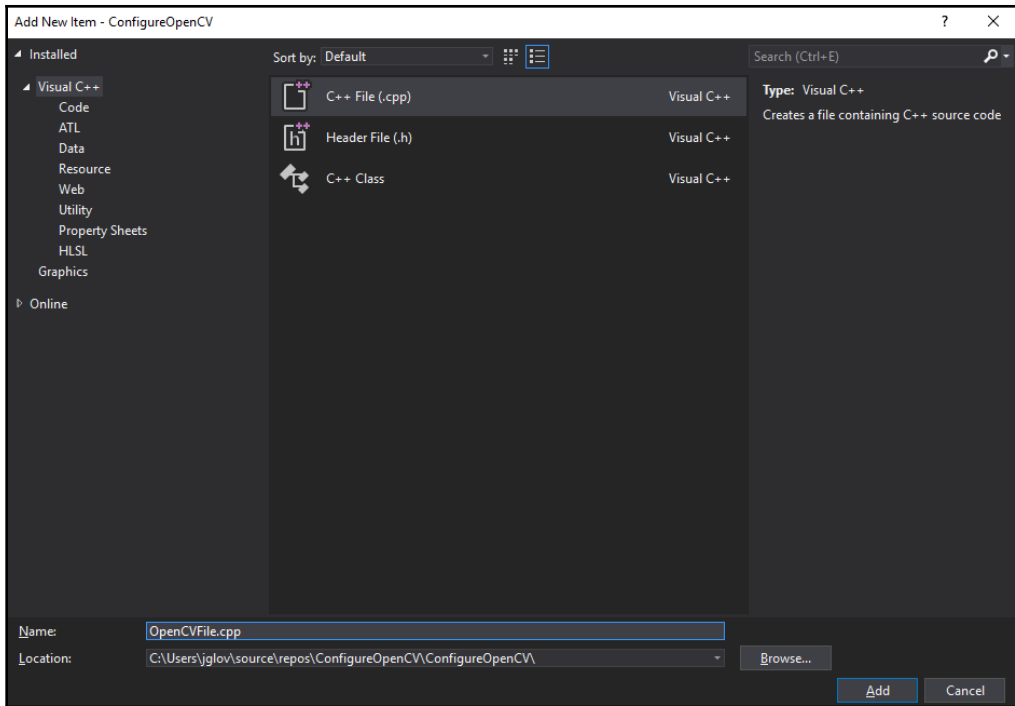
**General**

Executable Directories	\$(VC_ExecutablePath_x64);\$(WindowsSDK_ExecutablePath);\$(VS_ExecutablePath);\$(MSBuild
<b>Include Directories</b>	<b>\$(VC_IncludePath);\$(WindowsSDK_IncludePath);\$(OPENCV_DIR)\include</b>
Reference Directories	\$(VC_ReferencesPath_x64);
Library Directories	\$(VC_LibraryPath_x64);\$(WindowsSDK_LibraryPath_x64);\$(NETFX\ KitsDir)\Lib\um\x64
Library WinRT Directories	\$(WindowsSDK_MetadataPath);
Source Directories	\$(VC_SourcePath);
Exclude Directories	\$(VC_IncludePath);\$(WindowsSDK_IncludePath);\$(MSBuild_ExecutablePath);\$(VC_LibraryPa

**Include Directories**  
Path to use when searching for include files while building a VC++ project. Corresponds to environment variable INCLUDE.

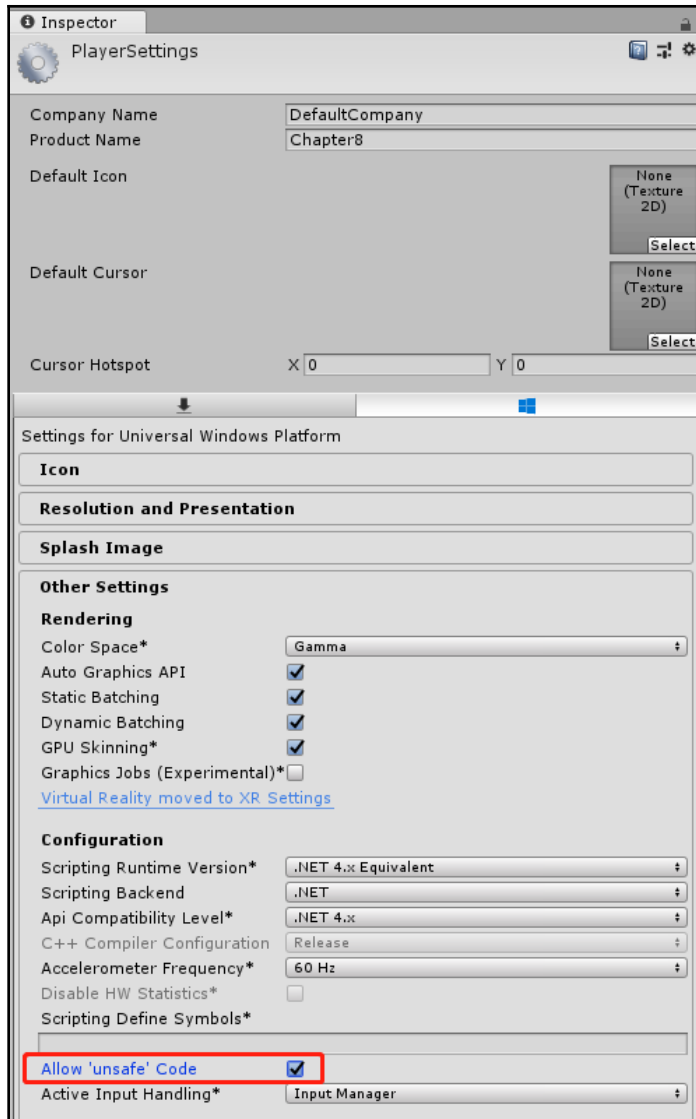
OK Cancel Apply





This PC > Local Disk (C:) > Users > jglov > source > repos > ConfigureOpenCV > x64 > Debug

Name	Date modified	Type	Size
ConfigureOpenCV.dll	7/20/2018 1:01 PM	Application extens	94 KB
ConfigureOpenCV.exp	7/20/2018 1:01 PM	Exports Library File	2 KB
ConfigureOpenCV.ilc	7/20/2018 1:01 PM	Incremental Linke...	465 KB
ConfigureOpenCV.lib	7/20/2018 12:57 PM	Object File Library	3 KB
ConfigureOpenCV.pdb	7/20/2018 1:01 PM	Program Debug D...	532 KB





This PC > Data (D:) > Dev Projects > C++ > OpenCV > opencv > build > etc > lbpcascades

Name	Date modified	Type	Size
lbpcascade_frontalcatface.xml	6/30/2017 8:01 AM	XML File	136 KB
lbpcascade_frontalface.xml	1/23/2017 6:44 PM	XML File	51 KB
lbpcascade_frontalface_improved.xml	2/9/2017 8:01 AM	XML File	53 KB
lbpcascade_profileface.xml	1/23/2017 6:44 PM	XML File	46 KB
lbpcascade_silverware.xml	1/23/2017 6:44 PM	XML File	46 KB

**Inspector**

ConfigureOpenCV Import Settings Open

**Select platforms for plugin**

Any Platform

**Exclude Platforms**

Editor

Standalone

WSAPlayer

**Platform settings**

SDK: Any SDK

CPU: X64

ScriptingBackend: Any Scripting Backend

Don't process

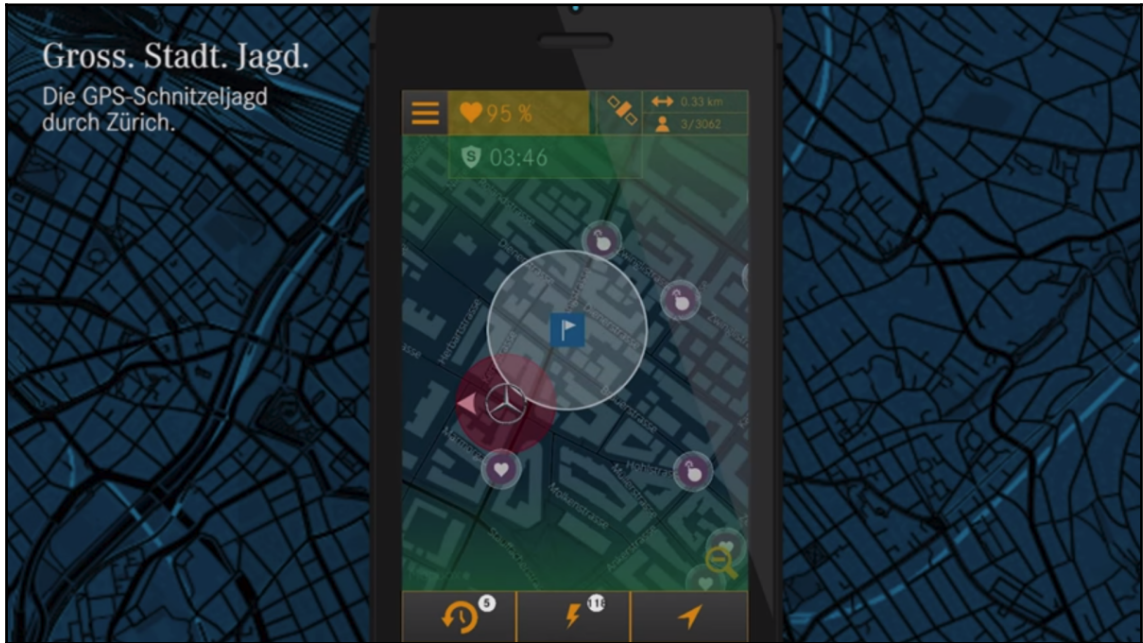
Revert Apply

**Information**

Path: Assets/Plugins/ConfigureOpenCV.dll

Type: Native

## Chapter 8: To the HoloLens and Beyond



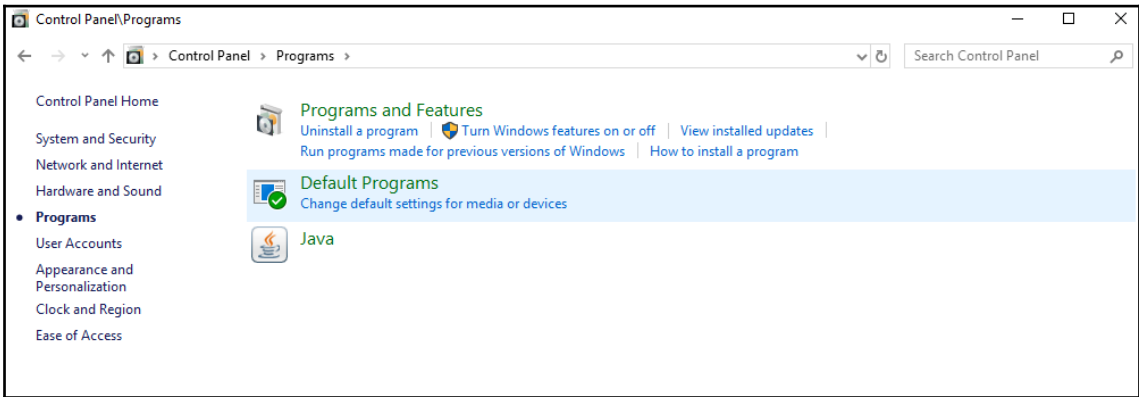
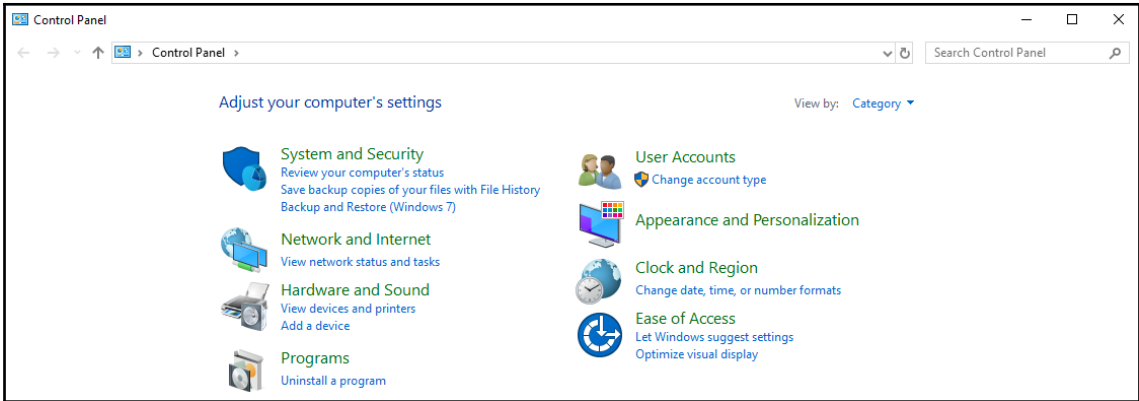


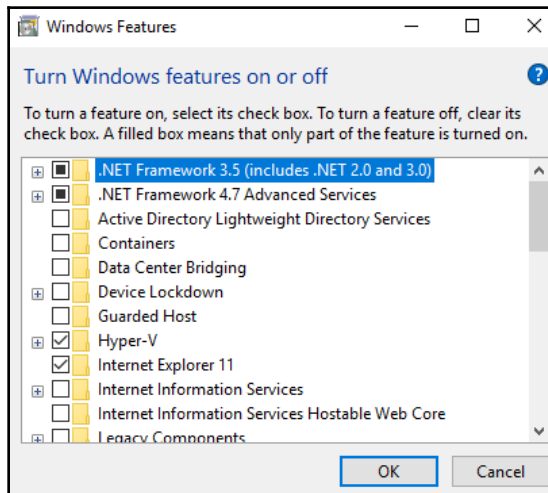
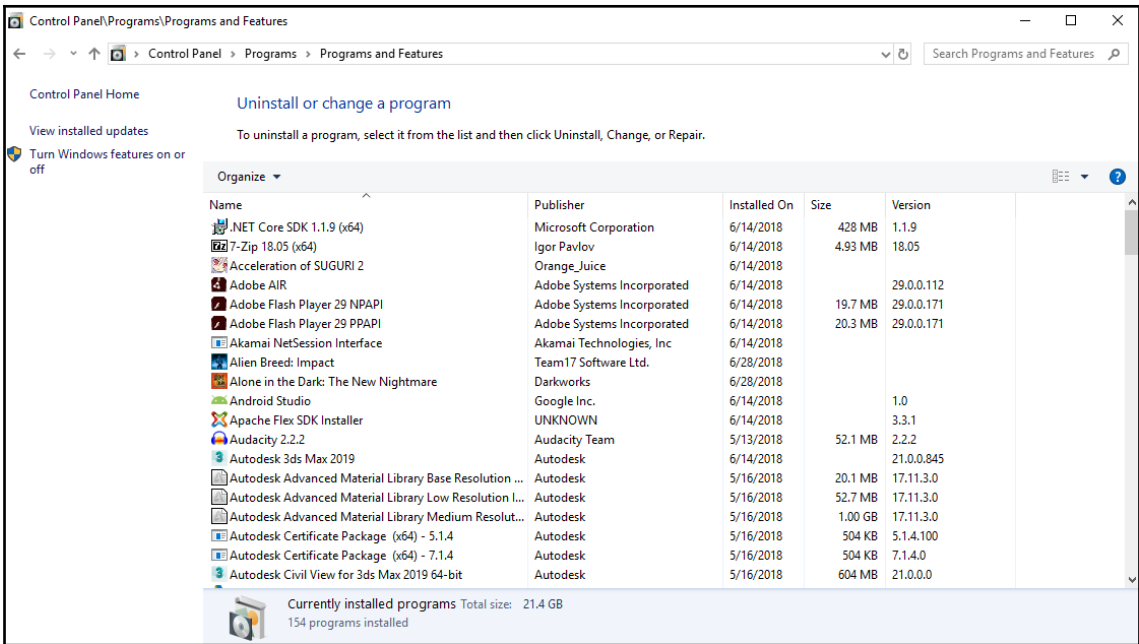




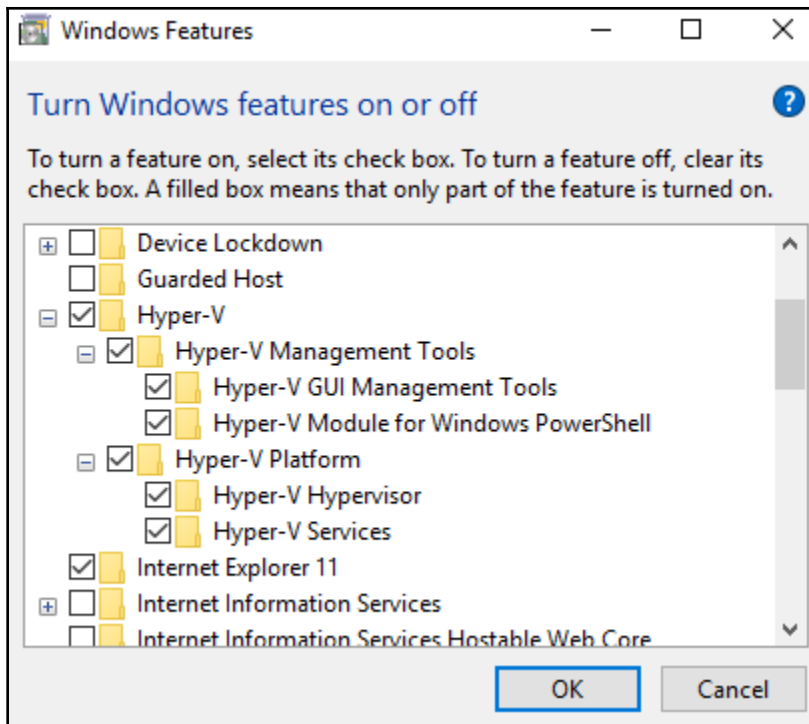
	<b>Minimum</b>	<b>Recommended</b>
Processor	<b>Notebook:</b> Intel Mobile Core i5 7th generation CPU, Dual-Core with Hyper Threading <b>Desktop:</b> Intel Desktop i5 6th generation CPU, Dual-Core with Hyper Threading <b>OR</b> AMD FX4350 4.2Ghz Quad-Core equivalent	<b>Desktop:</b> Intel Desktop i7 6th generation (6 Core) <b>OR</b> AMD Ryzen 5 1600 (6 Core, 12 threads)
GPU	<b>Notebook:</b> NVIDIA GTX 965M, AMD RX 460M (2GB) equivalent or greater DX12 capable GPU <b>Desktop:</b> NVIDIA GTX 960/1050, AMD Radeon RX 460 (2GB) equivalent or greater DX12 capable GPU	<b>Desktop:</b> NVIDIA GTX 980/1060, AMD Radeon RX 480 (2GB) equivalent or greater DX12 capable GPU
GPU driver WDDM version	WDDM 2.2 driver	
Thermal Design Power	15W or greater	
Graphics display ports	1x available graphics display port for headset (HDMI 1.4 or DisplayPort 1.2 for 60Hz headsets, HDMI 2.0 or DisplayPort 1.2 for 90Hz headsets)	
Display resolution	Resolution: SVGA (800x600) or greater Bit depth: 32 bits of color per pixel	
Memory	8 GB of RAM or greater	16 GB of RAM or greater
Storage	>10 GB additional free space	
USB Ports	1x available USB port for headset (USB 3.0 Type-A) <b>Note: USB must supply a minimum of 900mA</b>	
Bluetooth	Bluetooth 4.0 (for accessory connectivity)	












# Visual Studio Installer

[Products](#)

## Installed




**Visual Studio Community 2017**  
15.7.4  
Free, fully-featured IDE for students, open-source and individual developers

[Release notes](#)


[Modify](#) [Launch](#) [More](#) ▾

## Available



**Visual Studio Enterprise 2017**  
15.7.4  
Microsoft DevOps solution for productivity and coordination across teams of any size  
[License terms](#) | [Release notes](#)


[Install](#)




**Visual Studio Professional 2017**

### Welcome!

We invite you to go online to hone your skills and find additional tools to support your development workflow.

 [Learn](#)  
Whether you're new to development or an experienced developer, we have you covered with our tutorials, videos, and sample code.

 [Marketplace](#)  
Use Visual Studio extensions to add support for new technologies, integrate with other products and services, and fine-tune your experience.

**Need some help?**  
Check out the [Microsoft Developer Community](#) where developers provide feedback and answers to many common problems.

Get help from Microsoft at [Visual Studio Support](#).

1.16.1247.518

Modifying — Visual Studio Community 2017 — 15.7.4

[Workloads](#)   [Individual components](#)   [Language packs](#)   [Installation locations](#)

## Workloads

### Individual components

- Visual C++ ATL (x86/x64) with Spectre Mitigations
- Visual C++ ATL for ARM
- Visual C++ ATL for ARM with Spectre Mitigations
- Visual C++ ATL for ARM64
- Visual C++ ATL for ARM64 with Spectre Mitigations
- Visual C++ ATL for x86 and x64
- Visual C++ MFC for ARM
- Visual C++ MFC for ARM with Spectre Mitigations
- Visual C++ MFC for ARM64
- Visual C++ MFC for x86 and x64
- Visual C++ MFC for x86/x64 with Spectre Mitigations
- Visual C++ MFC support for ARM64 with Spectre Mitigations
- Visual Studio SDK
- Windows 10 SDK (10.0.10240.0)
- Windows 10 SDK (10.0.10586.0)
- Windows 10 SDK (10.0.14393.0)
- Windows 10 SDK (10.0.15063.0) for Desktop C++ [x86 and x64]
- Windows 10 SDK (10.0.15063.0) for UWP: C#, VB, JS
- Windows 10 SDK (10.0.15063.0) for UWP: C++
- Windows 10 SDK (10.0.16299.0) for Desktop C++ [ARM and ARM64]
- Windows 10 SDK (10.0.16299.0) for Desktop C++ [x86 and x64]
- Windows 10 SDK (10.0.16299.0) for UWP: C#, VB, JS
- Windows 10 SDK (10.0.16299.0) for UWP: C++
- Windows 8.1 SDK
- Windows Universal C Runtime

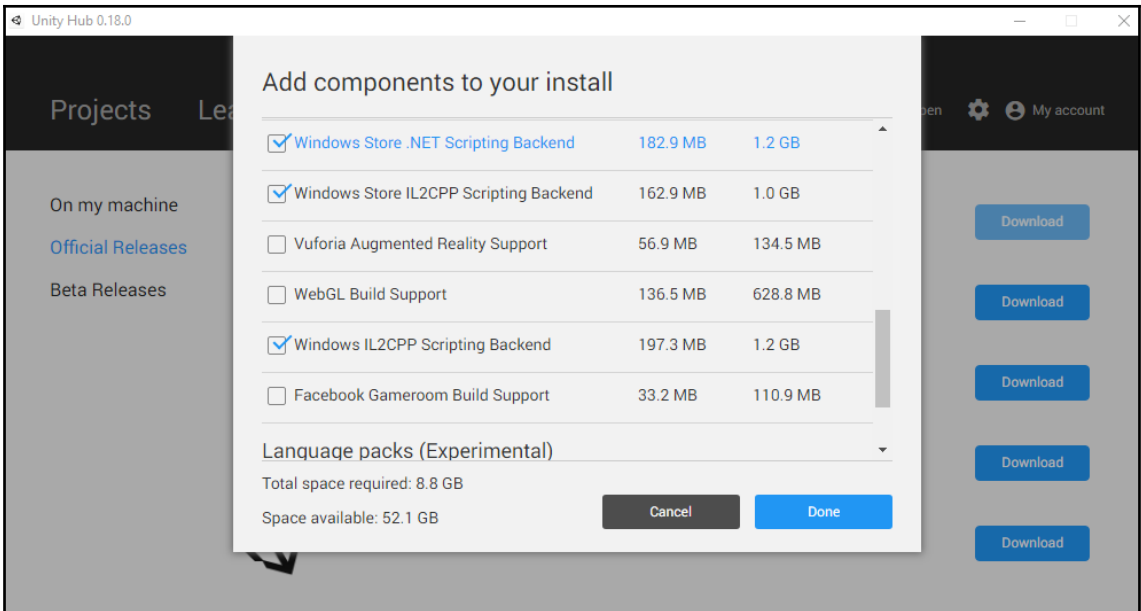
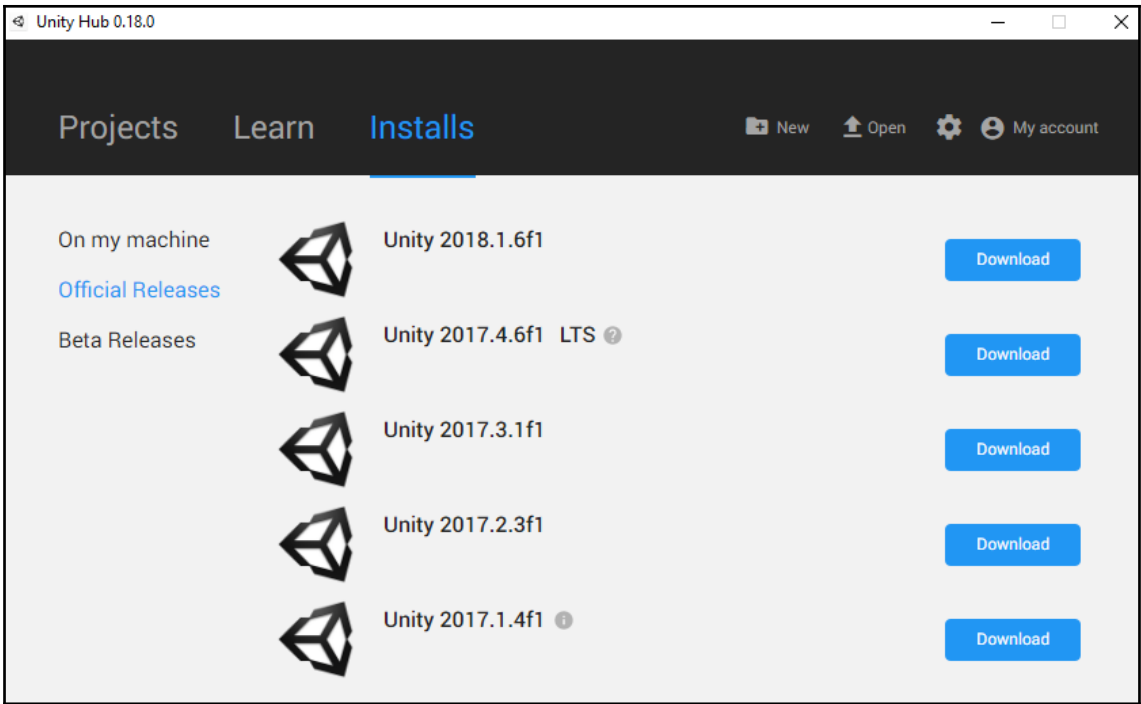
#### Location

C:\Program Files (x86)\Microsoft Visual Studio\2017\Community [Change...](#)

By continuing, you agree to the [license](#) for the Visual Studio edition you selected. We also offer the ability to download other software with Visual Studio. This software is licensed separately, as set out in the [3rd Party Notices](#) or in its accompanying license. By continuing, you also agree to those licenses.

## Summary

- > Visual Studio core editor
- > Universal Windows Platform development
- > .NET desktop development
- > Desktop development with C++
- > Game development with Unity
- > Game development with C++
- > Individual components
  - .NET Native
  - NuGet package manager
  - TypeScript 2.8 SDK
  - JavaScript and TypeScript language support
  - C# and Visual Basic Roslyn compilers
  - Static analysis tools
  - C# and Visual Basic
  - Windows 10 SDK (10.0.17134.0)
  - VC++ 2017 version 15.7 v14.14 latest v141 tools
  - Visual C++ runtime for UWP
  - Windows 10 SDK (10.0.16299.0) for UWP: C#, VB, JS
  - .NET Framework 4.6.1 targeting pack
  - F# language support
  - Windows 10 SDK (10.0.16299.0) for UWP: C++
  - Windows 10 SDK (10.0.16299.0) for Desktop C++ [x...
  - F# language support for web projects
  - Advanced ASP.NET features
  - .NET Core runtime
  - Visual C++ tools for CMake and Linux
  - Windows 10 Mobile Emulator (Anniversary Edition)
  - Windows 10 Mobile Emulator (Creators Update)
  - Visual Studio Emulator for Android



# Free 3D Scifi Models

269 Results: Page 1

Free x Formats Poly Count License Animated Rugged Real-Time i

HQ OFF



## Sci-Fi Robot

by baqlot

Free

Download

Royalty Free License - All Extended Uses

### Included Formats

#### Converted Formats:

Maya 2013 mental ray 2013  
Maya 2013 mental ray 2013

#### Exchange Formats:

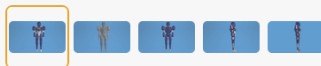
FBX 2013  
OBJ 2013

### Complete Confidence



### 3D Model Specifications

Product ID: 925997  
Published: May 12, 2015  
Downloads: 5956




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- more ▾

← 1 of 5 →








72 item | Per page: 15 ▾ | [hide thumbnails](#)

<input type="checkbox"/> ☆	Name	Price	Date Added	Review Status
<input type="checkbox"/> ☆	<b>Sci-Fi Robot</b>	Free	Jul 06, 2018	Unrated
	 <a href="#">robot_fbx.rar</a> Autodesk FBX (version: 2013) - 766 KB			
	<a href="#">robot_ma.rar</a> Maya (version: 2013) - 661 KB			
	<a href="#">robot_mb.rar</a> Maya (version: 2013) - 394 KB			
	<a href="#">robot_obj.rar</a> OBJ (version: 2013) - 736 KB			
	<input type="checkbox"/> <a href="#">show fewer</a>			


Name	Date modified	Type	Size
 robot_fbx.rar	7/24/2018 6:38 AM	WinRAR archive	767 KB

**Open**

-  Open with WinRAR
-  Extract files...
-  Extract Here
-  Extract to robot\_fbx\
- 7-Zip >
- CRC SHA >
-  Edit with Notepad++
-  Scan with Windows Defender...
-  Share
- Open with >

---

-  MagicISO >
- Give access to >
- Restore previous versions

---

- Send to >

---

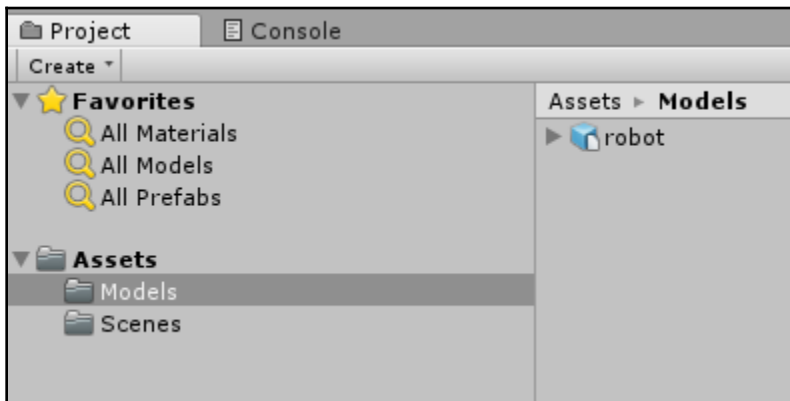
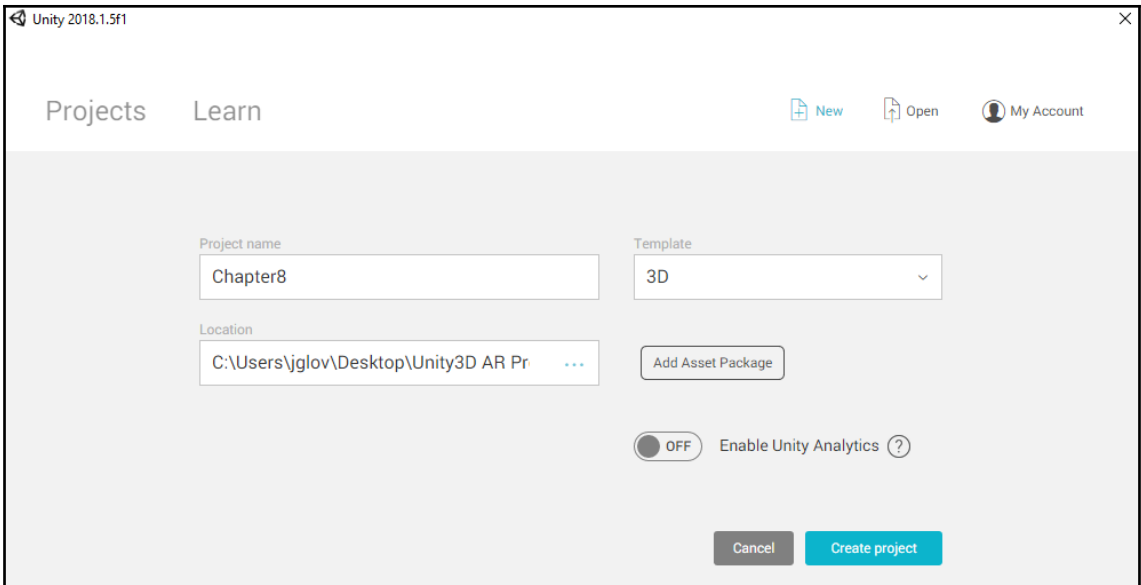
- Cut
- Copy

---

- Create shortcut
- Delete
- Rename

---

- Properties





## Specify Location

- Install the Microsoft HoloLens Emulator 10.0.14393.0 to this computer

Install Path:

C:\Program Files (x86)\Windows Kits\10\

Browse...

\* Windows Kit common installation path used

- Download the Microsoft HoloLens Emulator 10.0.14393.0 for installation on a separate computer

Download Path:

C:\Users\jglov\Downloads\Windows Kits\10\Emulator

Browse...

Estimated disk space required: 2.3 GB  
Disk space available: 43.7 GB

Next

Cancel

## Windows Kits Privacy

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[Tell me more about the Customer Experience Improvement Program \(CEIP\).](#)

**\* You are currently participating in the CEIP program. Participation applies to all Windows kits installed on this computer.**

**Yes**

**No**

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Next

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- updates,
- supplements,
- Internet-based services, and
- support services

for this software, unless other terms accompany those items. If so, those terms apply.

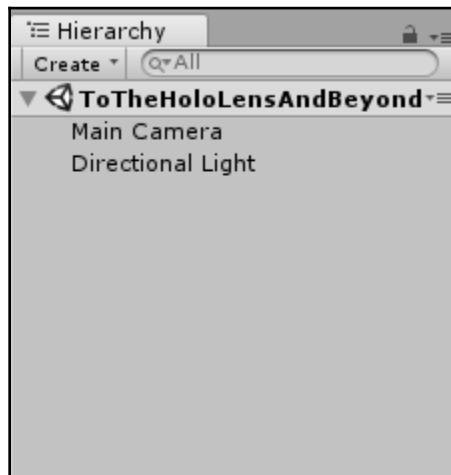
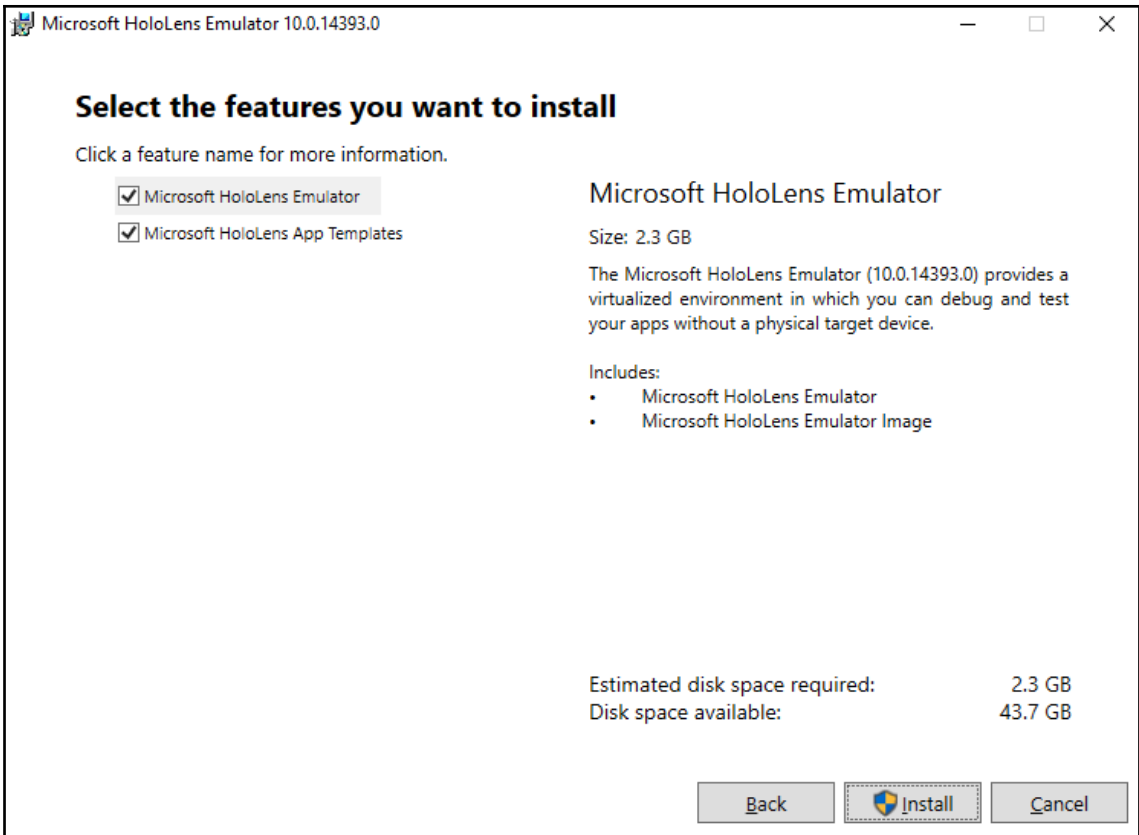
By using the software, you accept these terms. If you do not accept them, do not use the software.


As described below, using some features also operates as your consent to the transmission of certain standard computer information for Internet-based services.

Back

Accept

Decline




  Main Camera  Static ▼  
Tag MainCamera ↑ Layer Default ↑

**Transform** ? ↔ ⚙️

Position	X	0	Y	1	Z	-10
Rotation	X	0	Y	0	Z	0
Scale	X	1	Y	1	Z	1

**Inspector** ? ↔ ⚙️


  Main Camera  Static ▼  
Tag MainCamera ↑ Layer Default ↑

**Transform** ? ↔ ⚙️

Position	X	0	Y	0	Z	0
Rotation	X	0	Y	0	Z	0
Scale	X	1	Y	1	Z	1

**Camera** ? ↔ ⚙️

Clear Flags Skybox ↑

Background 



Culling Mask Everything ↑

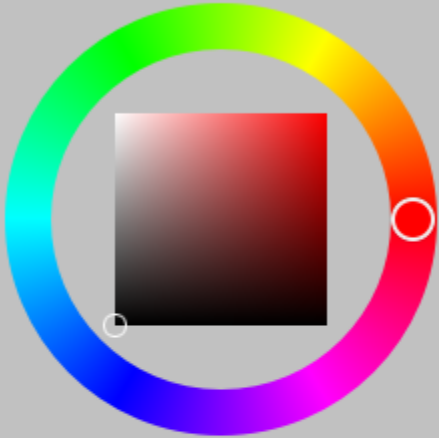
**Camera** ? ↔ ⚙️

Clear Flags Solid Color ↑

Background 


Color x


 





The color picker features a central square with a vertical gradient from black at the bottom to red at the top. This square is surrounded by a circular color wheel with a rainbow spectrum. Two small white circles are positioned on the wheel: one at the bottom (black) and one on the right (red).

RGB 0-255

R  0

G  0

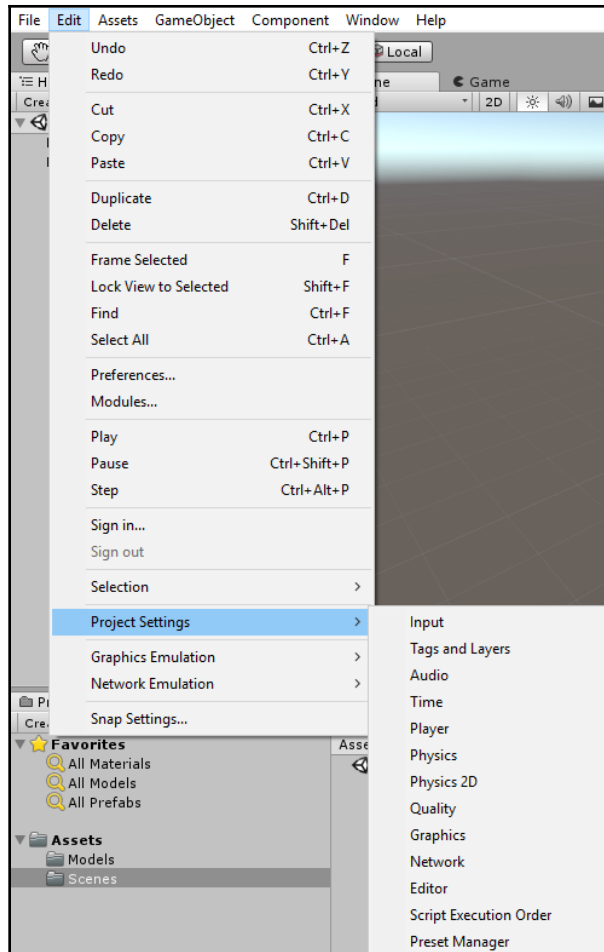
B  0

A  0

Hexadecimal

▼ Swatches ☰

Click to add new preset



Inspector

QualitySettings

**Levels**

Level	Enabled	Default	Delete
Very Low	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Low	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Medium	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
High	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Very High	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ultra	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Default**

Add Quality Level

---

Name: Ultra

**Rendering**

Pixel Light Count: 4

Texture Quality: Full Res

Anisotropic Textures: Per Texture

Anti Aliasing: 4x Multi Sampling

Soft Particles:



Inspector QualitySettings

**Levels**

Very Low	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Low	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Medium	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
High	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Very High	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ultra	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Default**

Add Quality Level

Name: Very Low

**Rendering**

Pixel Light Count: 0

Texture Quality: Half Res

Anisotropic Textures: Disabled

Anti Aliasing: Disabled

Soft Particles:

Realtime Reflection:

Billboards Face Cam:

Resolution Scaling Factor: 1

**Shadows**

Shadowmask Mode: Shadowmask

Shadows: Disable Shadows

Shadow Resolution: Low Resolution

Shadow Projection: Stable Fit

Shadow Distance: 15

Shadow Near Plane: 3

Shadow Cascades: No Cascades

**Other**

Blend Weights: 1 Bone

V Sync Count: Don't Sync

Lod Bias: 0.3

Maximum LOD Level: 0

Particle Raycast Budget: 4

Async Upload Time: 2

Async Upload Buffer: 4

Inspector

QualitySettings

**Levels**

Very Low	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Low	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Medium	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
High	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Very High	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ultra	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Default**

Add C

- Very Low
- Low
- Medium
- High
- Very High
- Ultra

---

**Rendering**

Name

Pixel Light Count

Texture Quality

Anisotropic Textures Disabled

Anti Aliasing Disabled

Soft Particles

Realtime Reflection

Billboards Face Cam

Resolution Scaling Fi 1

**Shadows**

Shadowmask Mode Shadowmask

Shadows Disable Shadows

Shadow Resolution Low Resolution

Shadow Projection Stable Fit

Shadow Distance 15

Shadow Near Plane 3

Shadow Cascades No Cascades

**Other**

Blend Weights 1 Bone

V Sync Count Don't Sync

Lod Bias 0.3

Maximum LOD Level 0

Particle Raycast Bud 4

Async Upload Time 2

Async Upload Buffer 4

Build Settings



Scenes In Build

- Scenes/ToTheHoloLensAndBeyond 0

Add Open Scenes

Platform

- PC, Mac & Linux Standalone
- Android
- iOS
- tvOS
- Xbox One
- PS Vita
- PS4
- Universal Windows Platform
- HTML5

Switch Platform

Player Settings...

PC, Mac & Linux Standalone

- Target Platform: Windows
- Architecture: x86\_64
- Copy PDB files:
- Development Build:
- Autoconnect Profiler:
- Script Debugging:
- Scripts Only Build:

Compression Method: Default

[Learn about Unity Cloud Build](#)

Build

Build And Run

Build Settings



Scenes In Build

- Scenes/ToTheHoloLensAndBeyond 0

Add Open Scenes

Platform

- PC, Mac & Linux Standalone
- Universal Windows Platform
- iOS
- tvOS
- Android
- Xbox One
- PS Vita
- PS4
- HTML

Switch Platform

Player Settings...

Universal Windows Platform

- Target Device: Any device
- Build Type: D3D
- SDK: Latest installed
- Visual Studio Version: Latest installed
- Build and Run on: Local Machine
- Build configuration: Release
- Copy References:
- Debugging**
- Unity C# Projects:
- Development Build:
- Autoconnect Profiler:
- Scripts Only Build:
- Compression Method: Default

[Learn about Unity Cloud Build](#)

Build

Build And Run

**Configuration**

Scripting Runtime Version: .NET 4.x Equivalent

Scripting Backend: .NET

Api Compatibility Level\*: .NET 4.x

C++ Compiler Configurat: Release

Accelerometer Frequency: 60 Hz

Disable HW Statistics\*

Scripting Define Symbols\*

**XR Settings**

Virtual Reality Supported

**XR Support Installers**

[Vuforia Augmented Reality](#)

**XR Settings**

Virtual Reality Supported

Virtual Reality SDKs

Windows Mixed Reality

Stereo Rendering Method: Multi Pass

**XR Support Installers**

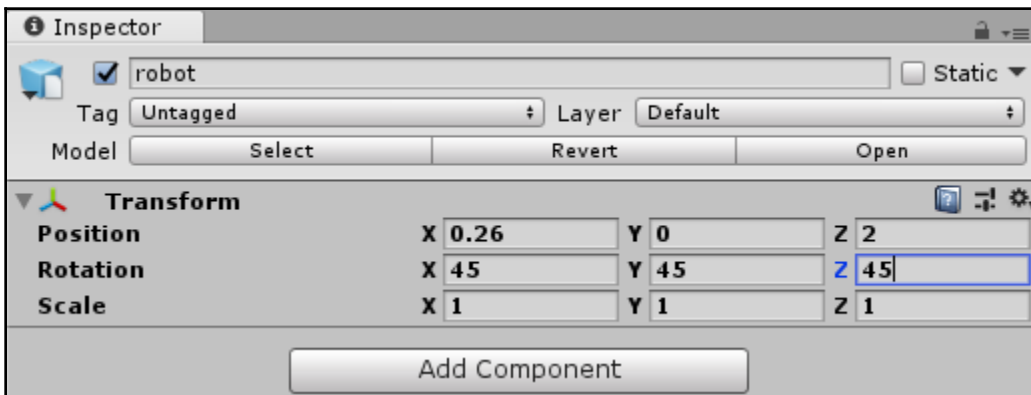
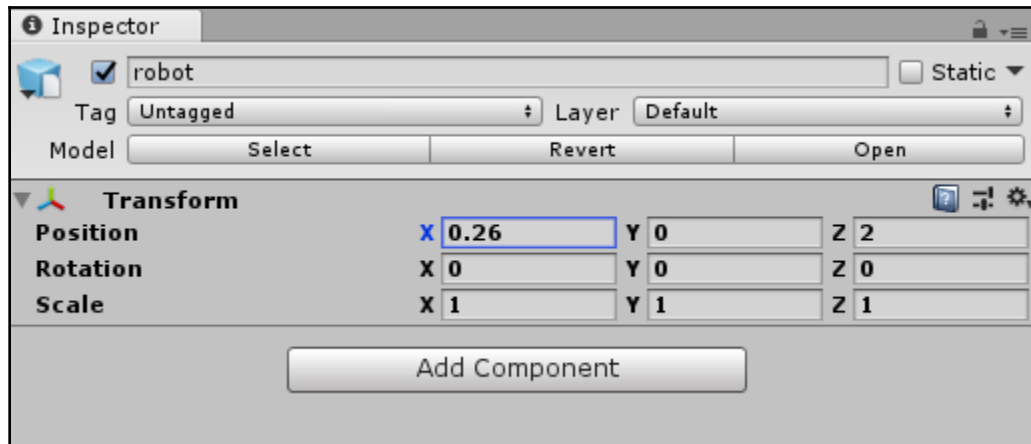
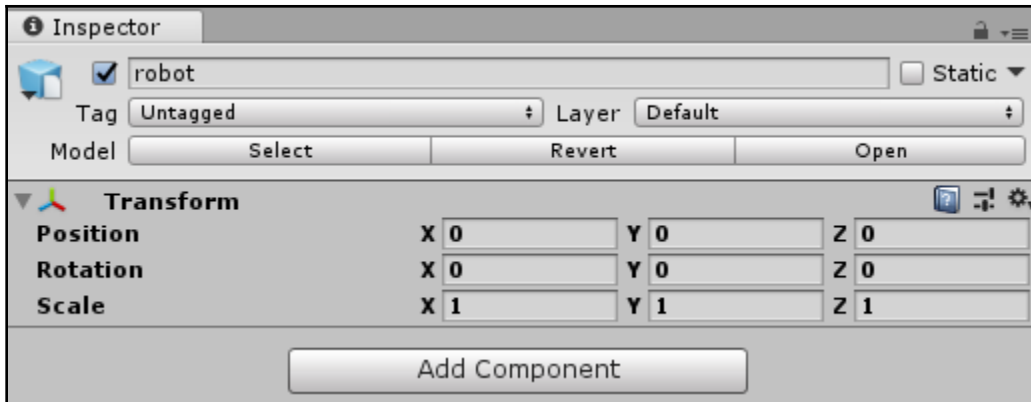
[Vuforia Augmented Reality](#)

Hierarchy

Create All

ToTheHoloLensAndBeyond\*

- Main Camera
- robot
- Directional Light



Inspector

robot  Static

Tag Untagged Layer Default

Model Select Revert Open

**Transform**

<b>Position</b>	X 0.26	Y 0	Z 2
<b>Rotation</b>	X 45	Y 45	Z 45
<b>Scale</b>	X 0.6	Y 0.6	Z 0.6

Add Component

# Build Settings



## Scenes In Build

Scenes/ToTheHoloLensAndBeyond

0

Add Open Scenes

## Platform

- PC, Mac & Linux Standalone
- Universal Windows Platform
- iOS
- tvOS
- Android
- Xbox One
- PS Vita
- PS4
- HTML

Universal Windows Platform

- Target Device: Any device
- Build Type: D3D
- SDK: Latest installed
- Visual Studio Version: Latest installed
- Build and Run on: Local Machine
- Build configuration: Release
- Copy References:
- Debugging**
- Unity C# Projects:
- Development Build:
- Autoconnect Profiler:
- Scripts Only Build:
- Compression Method: Default

[Learn about Unity Cloud Build](#)

Switch Platform

Player Settings...

Build

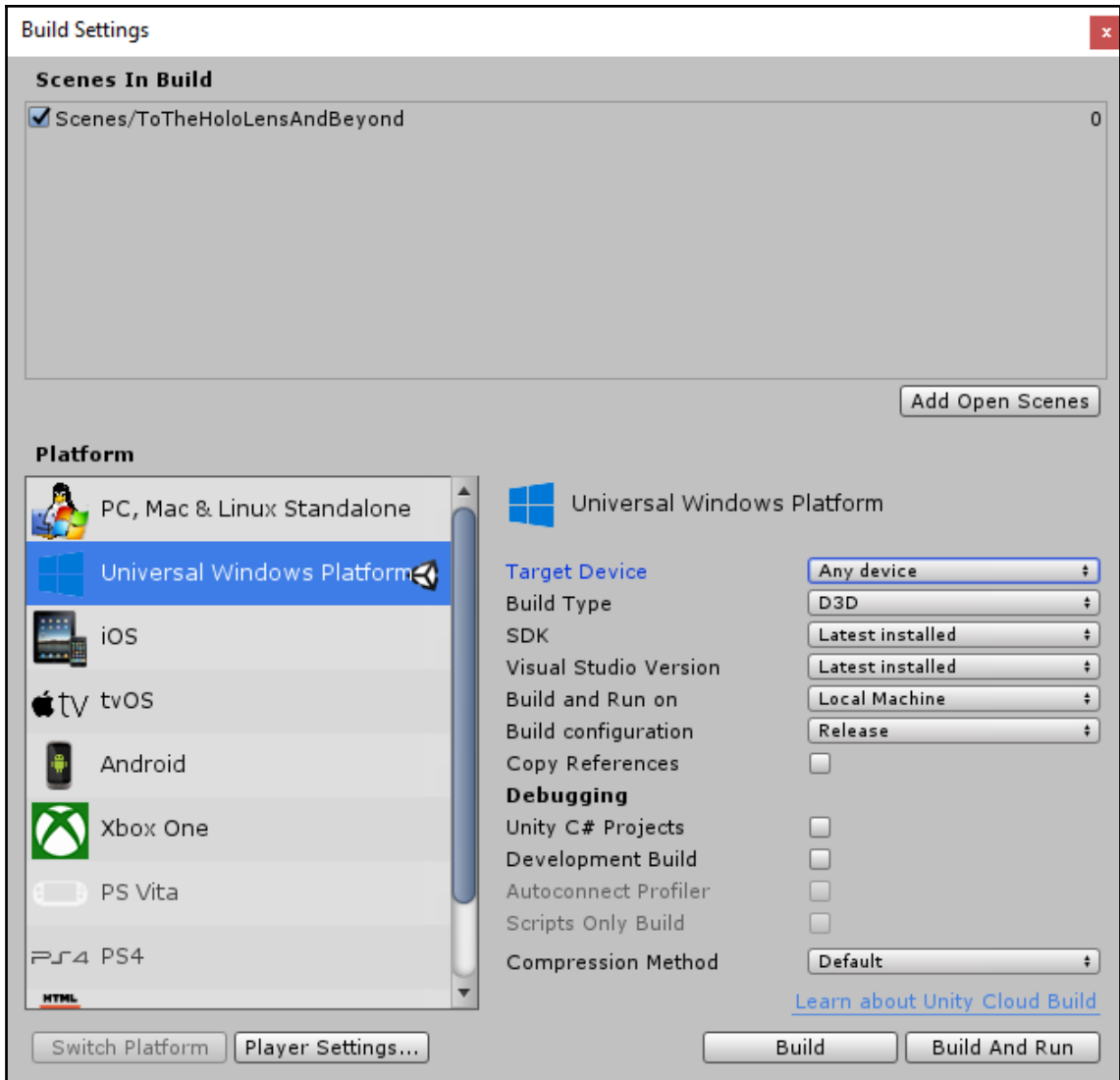
Build And Run



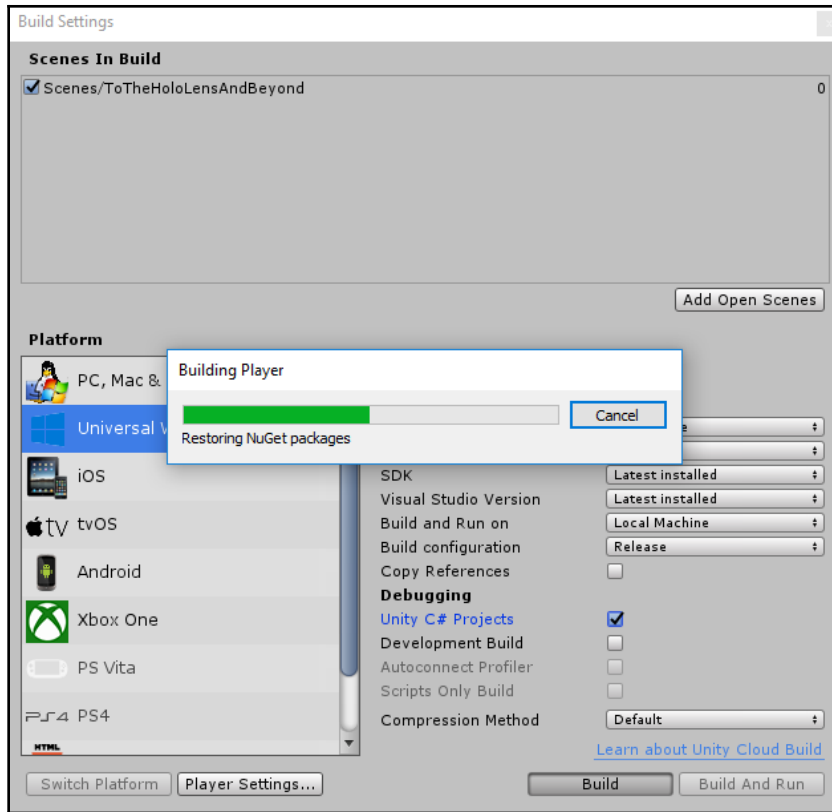


## Universal Windows Platform

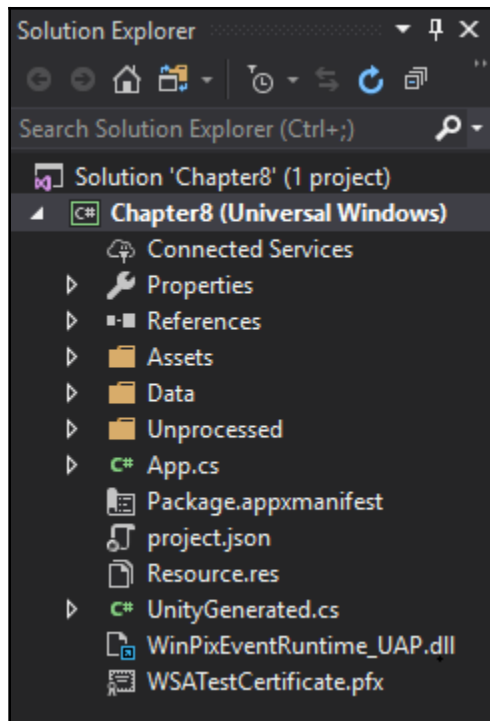
Target Device	Any device
Build Type	D3D
SDK	Latest installed
Visual Studio Version	Latest installed
Build and Run on	Local Machine
Build configuration	Release
Copy References	<input type="checkbox"/>
<b>Debugging</b>	
Unity C# Projects	<input checked="" type="checkbox"/>
Development Build	<input type="checkbox"/>
Autoconnect Profiler	<input type="checkbox"/>
Scripts Only Build	<input type="checkbox"/>
Compression Method	Default



Name	Date modified	Type	Size
App	7/6/2018 7:00 PM	File folder	
Assets	7/6/2018 5:38 PM	File folder	
Library	7/6/2018 6:50 PM	File folder	
Packages	6/28/2018 2:37 AM	File folder	
ProjectSettings	7/6/2018 6:50 PM	File folder	
Temp	7/6/2018 6:50 PM	File folder	



Name	Date modified	Type	Size
Chapter8	7/6/2018 7:02 PM	File folder	
Unity	7/6/2018 7:02 PM	File folder	
Chapter8.sln	7/6/2018 7:02 PM	Microsoft Visual S...	3 KB
UnityCommon.props	7/6/2018 7:02 PM	Project Property File	1 KB
UnityOverwrite.txt	7/6/2018 7:02 PM	Text Document	2 KB



Release

x64

▶ HoloLens Emulator 10.0.11082.1039

