OpenCV ObjectDetector

iOS & **Android** support

Win & **Mac** Standalone support

Support for preview in the **Editor**

Work with Unity Free & Pro

System Requirements

Build Win Standalone & Preview Editor : Windows7 or later

Build Mac Standalone & Preview Editor : OSX 10.8 or later

"OpenCV ObjectDetector" can detect(Sync or Async) an object from Texture2D using OpenCV.

- You can get a processing result of detectMultiScale() of OpenCV using haar cascade file that you specified.
- Object detection parameters (same as the parameters of detectMultiScale()) can be set in JSON format, You can get in JSON format Object detection result.

Please download Demo Application for Android and watch tutorial video.

Version changes

1.1.1 [Common]Support for Unity5

1.1.0 [Common]Update to OpenCV2.4.10

1.0.9 [iOS]Support for arm64 build target.(Unity 4.6.1p3 or higher)

1.0.8 [Android]Support for x86 build target.(Unity 4.6 or higher)

1.0.7 [Common]Update SampleScene(Process of converting results of object detection to the 3D position).

1.0.6 [Common]Support for preview in the Editor.(Pro only) [Common]Support for Win & Mac Standalone.(Pro only) [Android]Change of location of the cascade file.Changed to use "Aseets/StreamingAssets/" folder. [iOS] Add the cascade file to Xcode project is no longer required.Changed to use"Aseets/StreamingAssets/" folder.

1.0.4 [iOS]fix library(libjpeg,libpng) version coflicts.

1.0.3 update ReadMe.pdf

1.0.2 [Common]Update to OpenCV2.4.9.[Common]Support LBP cascade file. [Android]opencv library – 2.4.8.jar is no longer required.[iOS] Link "libc++.dylib" to Xcode project is no longer required.

1.0.1 Remove unnecessary files.

1.0.0 Initial version

Upgrade Guide

From 1.0.7 [Android]"OpenCVObjectDetector/Plugins/Android/"folder has been changed file configuration. Please delete "OpenCVObjectDetector/Plugins/Android/*******.so".

From 1.0.4 [Android] If "Error: Duplicate file(s) in apk" occurs , Please delete the file with the same name in the "Plugins/Android/assets/"folder. [iOS] Add the cascade file to Xcode project is no longer required.

Android Setup

Unity4

- Copy from "OpenCVObjectDetector/Plugins/Android/" to "Assets/Plugins/Android/" folder.

Unity5

- "OpenCVObjectDetector/Plugins/Android/opencvobjectdetector.jar" – Select platform Android in Inspector.
- "OpenCVObjectDetector/Plugins/libs/armeabi-v7a/*.so" – Select platform Android and CPU ARMv7 in Inspector.
- "OpenCVObjectDetector/Plugins/libs/x86/*.so" – Select platform Android and CPU x86 in Inspector.

- Put the cascade file that you want to use for object detection in the "Aseets/StreamingAssets/".

iOS Setup

Unity4

- Delete “OpenCVObjectDetector/Plugins/iOS/unity5/libopencvobjectdetector.a” and “OpenCVObjectDetector/iOS for Xcode/unity5/opencv2.framework”.
- Copy from “OpenCVObjectDetector/Plugins/iOS/” to “Assets/Plugin/iOS/” folder.
- Link “OpenCVObjectDetector/iOS for Xcode/unity4/opencv2.framework” to Xcode project. (in Xcode project. Build Phases > Link Binary with Libraries > Add opencv2.framework . recommend to use PostprocessBuildPlayer.)

Unity5

- Delete “OpenCVObjectDetector/Plugins/iOS/libopencvobjectdetector.a” and “OpenCVObjectDetector/iOS for Xcode/unity4/opencv2.framework”.
- “OpenCVObjectDetector/Plugins/iOS/unity5/libopencvobjectdetector.a” – Select platform iOS in Inspector.
- Link “OpenCVObjectDetector/iOS for Xcode/unity5/opencv2.framework” to Xcode project. (in Xcode project. Build Phases > Link Binary with Libraries > Add opencv2.framework . When a link error occurs, please add framework after delete once. recommend to use PostprocessBuildPlayer.)

- Put the cascade file that you want to use for object detection in the “Aseets/StreamingAssets/”.

Win Standalone Setup

Unity4

- Copy from "OpenCVObjectDetector/Plugins/x86/" to "Assets/Plugins/x86/" folder.
- Copy from "OpenCVObjectDetector/Plugins/x86_64/" to "Assets/Plugins/x86_64/" folder.

Unity5

- "OpenCVObjectDetector/Plugins/x86/opencvobjectdetector.dll" – Select platform Editor,Standalone and CPU x86 and OS Windows in Inspector.
- "OpenCVObjectDetector/Plugins/x86_64/opencvobjectdetector.dll" – Select platform Editor,Standalone and CPU x86_64 and OS Windows in Inspector.

- Put the cascade file that you want to use for object detection in the "Aseets/StreamingAssets/".

Mac Standalone Setup

Unity4

- Copy from "OpenCVObjectDetector/Plugins/opencvobjectdetector.bundle" to "Assets/Plugins/" folder.

- Put the cascade file that you want to use for object detection in the "Aseets/StreamingAssets/".

Detect param example (JSON format)

```
{
   "filename":"haarcascade_frontalface_alt",    //haar cascade filename
   "scaleFactor":1.1, //Please refer to OpenCV cvHaarDetectObjects() arg.
   "minNeighbors":2, // Please refer to OpenCV cvHaarDetectObjects() arg.
   "flags":2,    // Please refer to OpenCV cvHaarDetectObjects() arg.
   "minWidth":80,    // Please refer to OpenCV cvHaarDetectObjects() arg.
   "minHeight":80,    // Please refer to OpenCV cvHaarDetectObjects() arg.

   "flipCode":0,    //(optional) flip the image in Detect. Please refer to OpenCV cv::flip arg.

   "rects":[    //(optional) Ranges of detection in Texture2D. To set when you want to detect part of the Texture2D. Texture2D is bottom-left origin.

      {
         "id":0,    // (optional)Id identify the detection range.default 0.
         "x":10,
         "y":10,
         "width":200,
         "height":300
      },
      {
         "id":1,    //(optional) Id identify the detection range.default 0.
         "x":200,
         "y":210,
         "width":150,
         "height":150
      }
   ]
}
```

Detect result example (JSON format)

```
{
   "haarcascade_frontalface_alt":[    //cascade filename that was used to detect.
      {
         "id":0,    //detection range id that you set in Detect param.
         "x":20,
         "y":35,
         "width":179,
         "height":179
      },
      {
         "id":1,    //detection range id that you set in Detect param.
         "x":211,
         "y":200,
         "width":100,
         "height":95
      }
   ]
}
```

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