

# OpenCV ObjectDetector

**iOS & Android** support

**Win & Mac** Standalone support(**Pro only**)

Support for preview in the **Editor**.(**Pro only**)

**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

**1.1.0** [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**

- Copy from “OpenCVObjectDetector/Plugins/Android/” to “Assets/Plugins/Android/” folder.
- Put the cascade file that you want to use for object detection in the “Aseets/StreamingAssets/”.

### **iOS Setup**

- Copy from “OpenCVObjectDetector/Plugins/iOS/” to “Assets/Plugins/iOS/” folder.
- Put the cascade file that you want to use for object detection in the “Aseets/StreamingAssets/”.
- Link “OpenCVObjectDetector/iOS for Xcode/opencv2.framework” to Xcode project. (in Xcode project. Build Phases > Link Binary with Libraries > Add opencv2.framework . recommend to use PostprocessBuildPlayer.)

### **Win Standalone Setup**

- Copy from “OpenCVObjectDetector/Plugins/x86/” to “Assets/Plugins/x86/” folder.
- Copy from “OpenCVObjectDetector/Plugins/x86\_64/” to “Assets/Plugins/x86\_64/” folder.
- Put the cascade file that you want to use for object detection in the “Aseets/StreamingAssets/”.

### **Mac Standalone Setup**

- Copy from “OpenCVObjectDetector/Plugins/opencvobjectdetector.bundle” to “Assets/Plugins/opencvobjectdetector.bundle” 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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