High Dynamic Range Photography

In this lesson, we'll be taking a look at
High Dynamic Range Photography.

Estimated Completion Time: **10 minutes.**

High Dynamic Range Photography

High dynamic range photography is a process whereby multiple photographs are combined - or processed, to create a single photograph that contains a dynamic color and lighting range that is generally unobtainable with a single photograph.

This photograph has been processed in a HDR (High Dynamic Range) software package.

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The process is relatively simple. First, if your camera supports it, you use *exposure bracketing* to take a photograph(s).

This takes three photographs in quick succession - generally using a recommended exposure, a slightly overexposed photo, and a slightly underexposed photo. The result, as you see below, is three photographs. Using burst mode, and exposure compensation, if your camera supports it, is a perfect way to get theses shots. Set the compensation to +/- 2 stops.

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You will get even better results with more photos. Here, we ran exposure bracketing twice, once at a single stop, and once at 2 stops to get these five photos (the original photo in both brackets was the same).

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Next, the photos are merged together in HDR software. This software takes the best parts of each photograph, and combines them into one.

Such programs will allow you to make all sorts of fine tuning adjustments.

The resulting image contains a part of each of source images - with the best part of each image used in this final.

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The final HDR image.

The source images.

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As HDR programs allow a lot of control, you can get widely different results based on your preferences. Below, we've used a program called **PhotoMatrix,** and used a feature called **Exposure Fusion** to get the result below.

*The **PhotoMatrix** feature called **Exposure Fusion** compiled the three images to get this result.*

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The final HDR image.

The final Exposure Fusion image.

The source images.

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Some cameras (including the iPhone) now allow some in camera HDR processing. These cameras do, in the camera, essentially what the software on your computer can do. Given two or more shots with different exposure, these are combined to give an image that simply could not be captured in one image.

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The iPhone 4 introduced HDR (high dynamic range) photography to the mobile world. HDR photography is used to increase the possible range of color/exposure in an image. See the examples below.

These are unretouched photos taken on an iPhone 4. On the left, the original image. Note the washed out areas behind the dog. On the right is the HDR version of the same photograph. Note the area behind the dog in this shot and compare to the image on the left.

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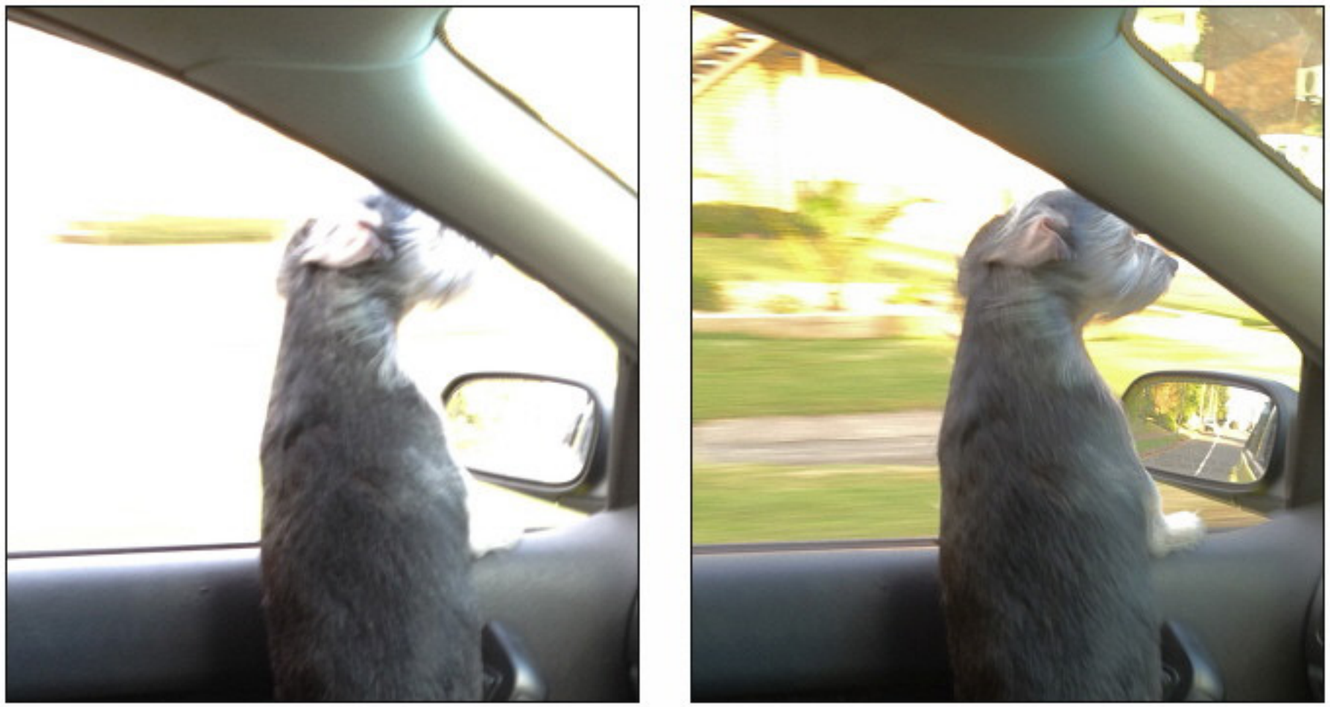
HDR works by the camera taking several shots in quick succession, using different exposures for each. The camera combines these images, allowing for darker and lighter areas that might normally be over or underexposed to be combined in the one photograph.



In these shots, look at the background. On the right, the HDR version gives a much better result - the original version is almost completely washed out.

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HDR does not always get you a better shot. This is why the iPhone will allow you to save an original, and a HDR version of a photo, if you wish. You can then decide which is better.

There are also third party camera apps in the iTunes App store that allow HDR photography on all iPhones.

Because, in HDR mode, the camera takes several shots in quick succession, you increase the chance of blur, or double image. HDR does not work that well where the subject or camera is moving.

High Dynamic Range Photography

Non HDR.

HDR.

High Dynamic Range Photography

Non HDR.

HDR.

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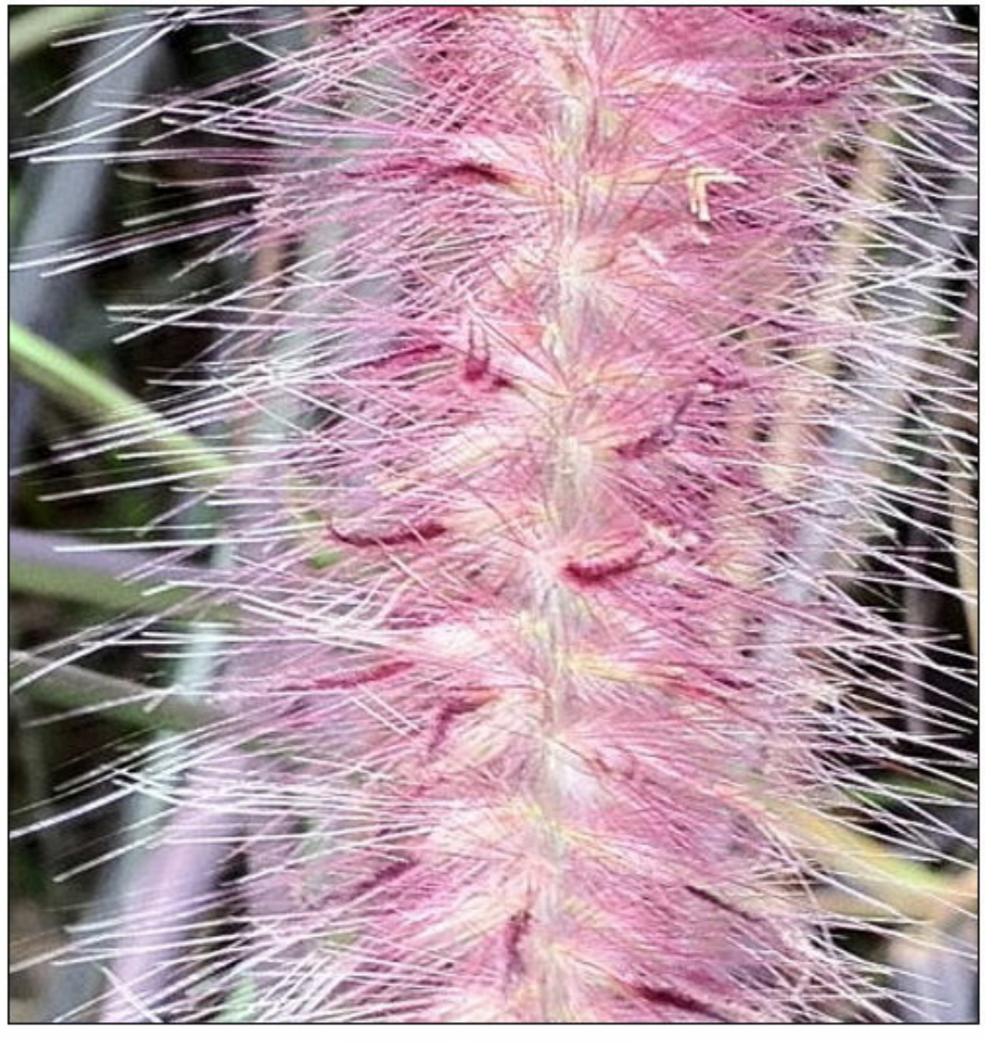
Non HDR - close-up.



HDR - close-up.

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You've now completed this lesson.

In this lesson, we took a look at
High Dynamic Range Photography.