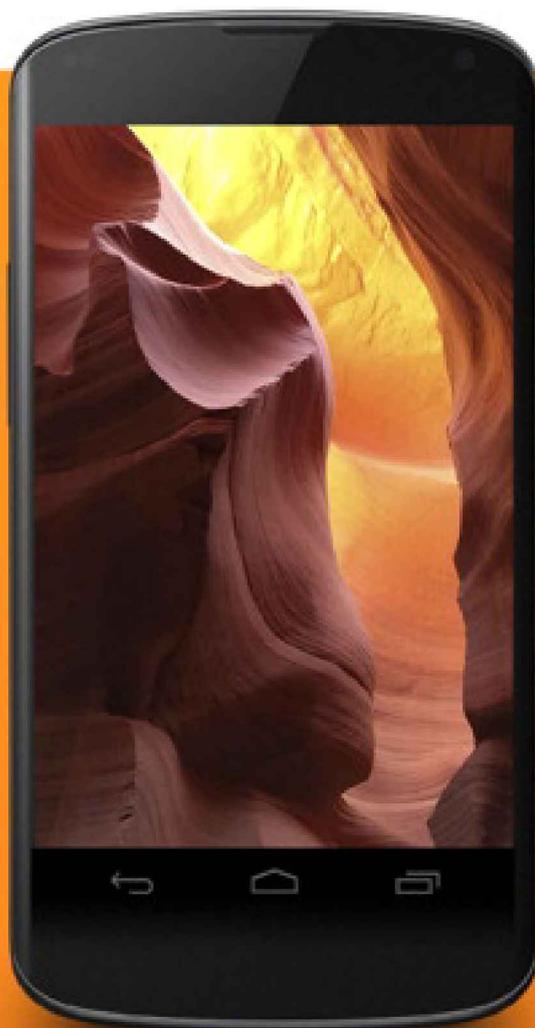


ANDROID Photography



Take Better
Photos
with Your
Android Phone
or Tablet

Colby Brown

Android Photography

Android Photography: Take better photos with your Android phone

Colby Brown

Peachpit Press

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9 8 7 6 5 4 3 2 1

Table of Contents

Introduction

Taking a Photo

Editing Your Images

Sharing Your Images

Android Mobile Photography Accessories

Introduction

When the Android phone debuted in October of 2008, no one really knew whether it would be a success. Apple's iPhone had been out for over a year, and it was already taking the world by storm. The Android phone was Google's first true foray into the mobile industry, and choosing an open source approach (where Google would freely license the Android operating system to other manufacturers to use) was risky to say the least. But as Android picked up more and more of the worldwide mobile market share, consumers and professionals alike began to take notice.

By the summer of 2010, I had bought my first Android phone, the HTC Incredible. Like many in the photography industry, I had been using an Apple iPhone, but I was getting bored with its user experience and the iOS operating system. Android gave me the opportunity to try something new and fully customize my phone, making it my own. This was a huge step in a new direction for mobile technology.

As we fast-forward to today, Android has become the most dominant mobile platform in the world. By the end of 2012, Google's operating system had claimed over 70 percent of the world's smartphone market. So what makes Android so popular? Choice! Because Google gives manufacturers (such as Samsung, HTC, and LG) the free use of their Android operating system, those manufacturers can turn around and offer a wide variety of devices with various feature sets at various price points.

As digital mobile technology has improved, the cameras in these devices have only gotten better and better. Most of us carry our phones with us at all times, and these devices have become our go-to option for capturing life around us. As a travel photographer, I carry my phone everywhere, documenting not only my adventures around the world or behind-the-scenes images of the work I am paid to shoot, but also my young son playing in my backyard or my wife as she prepares our garden for the upcoming season. Learning how to better use the camera on your Android phone will make all the difference in the world when it comes to capturing and sharing the world around you.

Conventions Used in This Book

If you are used to using a smartphone, the Android operating system won't be much of a stretch to wrap your head around. However, there are a few differences between the Android and devices like the iPhone.

Various Android Devices

While there are numerous Android mobile phones on the market, this book focuses on the Nexus line of Android smartphones that are sold directly by Google: the Galaxy Nexus and Nexus 4. This is intentional, because Samsung, HTC, LG, and other manufacturers write their own layer of software over the stock Android operating system. This means that their camera, gallery, and photo editing applications may have a slightly different look and feel. Regardless, the principal lessons in this book will still be helpful.

This book was written with Android 4.2.2 representing the latest system software release.

Application Menu System

In many of the applications covered in this book, you will be asked to access the application menu. This can be found by pressing the icon that looks like three dots on stacked on top of each other. It is often found in the upper-right corner of an application, but not always.

Taking a Photo

Whether you are a seasoned veteran or this happens to be your first Android smartphone, there are a number of basics that we need to cover to make sure you are headed in the right direction. The first section of this book will walk you through everything from learning how to hold your camera to understanding the touch functions to creating your first 360-degree panorama (otherwise known as a Photo Sphere).

Holding Your Phone (Grip)

Easily one of the most misunderstood elements of mobile photography is how to correctly hold your phone. As elementary as it might sound, how you hold your phone can make a huge difference in the quality of images you can produce with it. I am always surprised to see people fumbling with their phone in awkward stances while taking a photo, only to be disappointed with the resulting image.

So why is it so important? Two words: camera shake. Most people don't realize that our hands are constantly moving— even when we are trying to hold still. Between the natural sway that our bodies exhibit and the simple fact that we are constantly breathing, it shouldn't be surprising that we are generally in perpetual motion. The cameras in mobile phones are constantly trying to fight the motion blur caused by the movement of our hands and bodies. If we learn to hold our phones correctly, we can help eliminate some of this camera shake.

Horizontal Grip

When you're shooting in landscape orientation (horizontally), use two hands whenever possible (**Figure 1**). Use the thumb and pointer finger on your left hand and the pointer finger and palm of your right hand (with your ring finger supporting the back of the camera) to create a stable environment. This method allows you to use your right thumb to press the shutter button, which is on the right side of the LCD screen.

If you are unable to use two hands (**Figure 2**), you can try using just your right hand (pointer finger on top, with the lower-right corner of the camera resting on the palm of your hand). This method can be used with success, but do note that it requires extra attention to hand movement and generally requires a large hand (especially with the Nexus 4).



Figure 1

I recommend using two hands to capture a horizontal photo with your Android phone.



Figure 2

It is possible to capture a horizontal photo with just one hand, although it can be challenging depending on the size of your phone.

Vertical Grip

Of course, you might not always want to capture a horizontal image. To take a vertical image, flip your phone into portrait orientation (**Figure 3**), and using one hand, rest your phone on top of your pinky finger while using the rest of your fingers to support the back of the device. This will free up the use of your thumb to snap the shot when the moment comes.

Although you can use two hands to shoot vertical images, I generally find it more awkward than helpful. But if you truly need the extra stabilization, you can use the pointer finger and thumb on your left hand while resting the phone on your right ring finger (**Figure 4**). Press the shutter release button with your thumb.



Figure 3

It is generally easier to capture a vertical image with one hand.

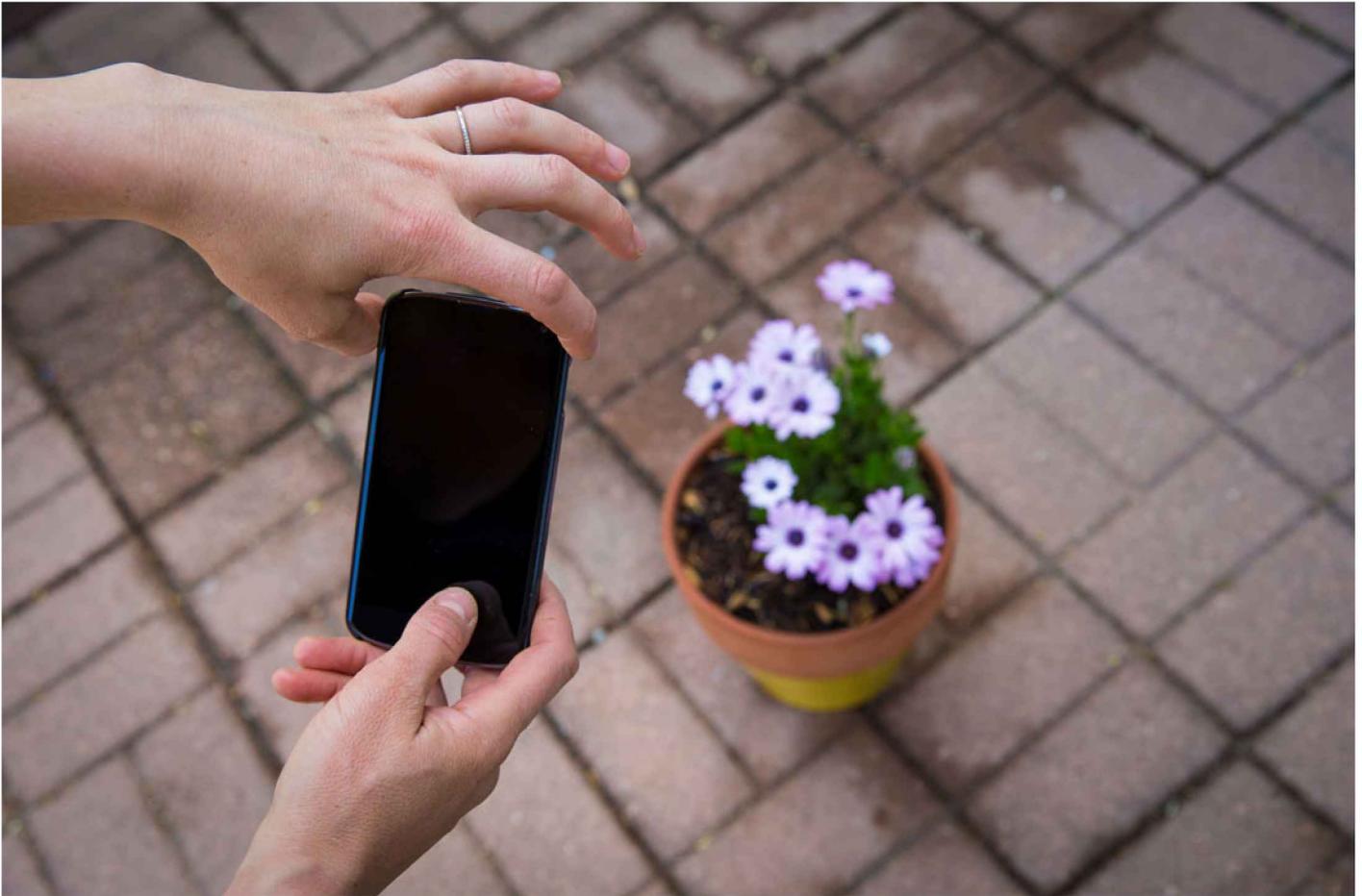


Figure 4

For extra stabilization on a particular vertical image, you can use two hands.

One of the best things you can do is purchase a soft rubber case for your phone. This will help you maintain a more secure grip on the phone and protect the phone if it's dropped on a hard surface.

The Android Camera



The Android's built-in, or *stock*, camera app is called Camera. In it, you can snap a photo, create a panorama, and access the Gallery app to view your images.

As mentioned, this book focuses on Google's Nexus line of smartphones (specifically the Nexus 4) because they offer the most up-to-date features and are the first to receive updates from Android. If you own a differently branded phone (from Samsung, HTC, or LG, for example), then you might notice that your camera application looks slightly different and contains different features.

Camera Layout

The first thing you will notice about the Android camera is that it has a very simple layout (**Figure 5**). Within the Camera app, you have access to a series of camera option menus that allow you to do

everything from turning on HDR to controlling the camera flash (Figure 6) to adjusting your white balance and setting a timer (Figure 7).



Figure 5

The stock Camera app. Note that the built-in Android buttons on the right of the screen will turn into small gray dots so that they are unobtrusive. Tapping any of them will make them all reappear.



Figure 6

The in-camera menu can also be brought up by pressing and holding the Camera app or by pressing the Option Menu button.



Figure 7

Once you're in the main menu, you can access a deeper set of options by pressing the More Settings button.

The Camera app's button layout

- Camera Modes. Press here to access the camera modes: Still Camera, Movie, Panorama, and Photo Sphere.
- Shutter Button. To take a photo or start recording a movie, press the blue shutter button.
- Option Menu. To pull up the onscreen menu, press the Option Menu icon.

In the Option menu, you have access to the following options:

- HDR Mode. Change from single-shot mode to HDR mode. We will discuss this mode in more depth shortly.
- Exposure Compensation. You can lighten or darken the exposure of a photo by up to three stops. For example, if you snap a shot and find it was too bright, simply choose an exposure compensation of -2 and try again.
- More Settings. Adjust the screen modes, choose the GPS location of your images, and adjust the picture size of your images.
- Flash Control. Force the flash to always fire or never fire, or let the camera decide (Auto).
- Reverse Camera. Change between the front-facing and rear-facing cameras.

Press the More Settings button for the following options:

- Geo-tagging Images. Enable this to add GPS coordinates to your images. Note that the GPS setting on your phone must be turned on for this to work.
- Timer. Set a timer delay of from 1 to 60 seconds.
- Picture Size. Adjust the megapixel size of the images you are taking.
- White Balance. Adjust the color tone of your images. More on this later in this book.
- Scene Modes. Choose from a variety of modes that can help you take a better photo under specific conditions: Action, Night, Sunset, and Party.

Touch Functions

Pressing anywhere on the LCD screen will activate a white circle that both focuses and tries to determine the exposure of the photograph you are attempting to capture. Once you have achieved focus, the brackets inside the white circle will light up green. This gives you more control over the focus and quality of your image. By focusing on different locations inside your composed shot, you will find varying

exposure levels. The two screenshots in **Figure 8** illustrate how differently a photo can turn out depending on where you choose to direct the camera's exposure and focus ring.



Figure 8

By focusing on different areas of an image, you can change the overall exposure.

To access the built-in Gallery app from inside the Camera app, simply swipe left from the right edge of your screen (**Figure 9**). Note that this is much easier to do when shooting in the vertical orientation.



Figure 9

To access the Gallery app and view any images you have taken, swipe left from the right edge of the screen.

HDR Mode

HDR (High Dynamic Range) is useful when you want to create a more balanced scene, with details in each light spectrum (highlights, mid-tones, and shadows). For example, if you were taking a photo of a mountain that had a dark forest at its base and a bright blue sky in the background, HDR might be able to balance out the light across your scene so that the sky is not too bright and the forest is not too dark (Figure 10).



Figure 10

Use HDR mode to create a more dynamic photo from a scene with bright highlights and dark shadows.

To access HDR mode on your Android device, press anywhere on the LCD screen to initiate the Camera menu (or press the Option Menu button), and then select the HDR thumbnail.

Movie Mode

With an Android phone, you have the ability to record high-definition videos in 1080p, 720p, or 480p.

To begin recording a movie, press the Camera Modes button on the main camera screen. Then choose the Movie icon from the slide-out menu. To begin recording, press the red start button on the right side of the LCD screen (**Figure 11**).



Figure 11

The red start button allows you to both start and stop recording a movie.

When you are in the Movie mode, you have a limited number of options inside the Camera and Settings menus.

- Camera Menu (**A**): Reverse Camera, Flash Control, White Balance, and More Settings.
- Settings Menu (**B**): Turn on Time Lapse, adjust video quality (1080p, 720p, or 480p) and choose to store the GPS location of the video.



The Time Lapse feature in Android 4.2.2 is a hidden gem. It allows you to take a set number of still images and compile them into a movie that can be viewed. It is a great feature to experiment with during a sunset or a scene with changing light.

Panorama Mode

If you have ever wanted to capture an incredibly wide scene, you will want to use Panorama mode in the Camera app. In this mode, you can take 180-degree panorama images, capturing a wide range of information in a single photo (Figure 12).



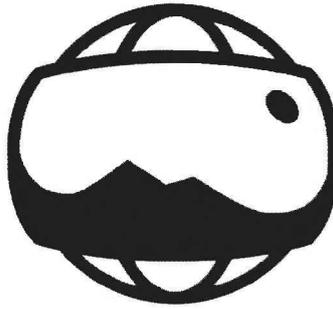
Figure 12

A panorama spans 180 degrees of a scene.

To access this mode, press the Camera Modes button in the Camera menu. The screen will go dark for a second before reappearing with a thick black frame around the scene your phone is pointed at (A). Make sure your phone is in the vertical orientation before pressing the blue shutter button. Once you have started the panorama, slowly turn your camera either left or right, watching the status bar at the bottom of the screen turn blue as you progress through the panorama (B). As you move through the scene, follow the guide to line up your panorama. You can stop at any point by pressing the shutter button again.



Creating a Photo Sphere



One of the best features of Android is its ability to create dynamic 360-degree panoramas, otherwise known as Photo Spheres (requires Android 4.2 or higher). The idea is that you can create a single image that allows the viewer to look both horizontally and vertically in 360 degrees, as if you were inside a bubble. When viewed normally, it looks like a tall panorama (**Figure 13**), but when you view it inside Google+ or a designated Photo Sphere viewer, the experience becomes much more immersive (**Figure 14**).



Figure 13

When flattened out, a Photo Sphere looks like an incredibly large panorama.

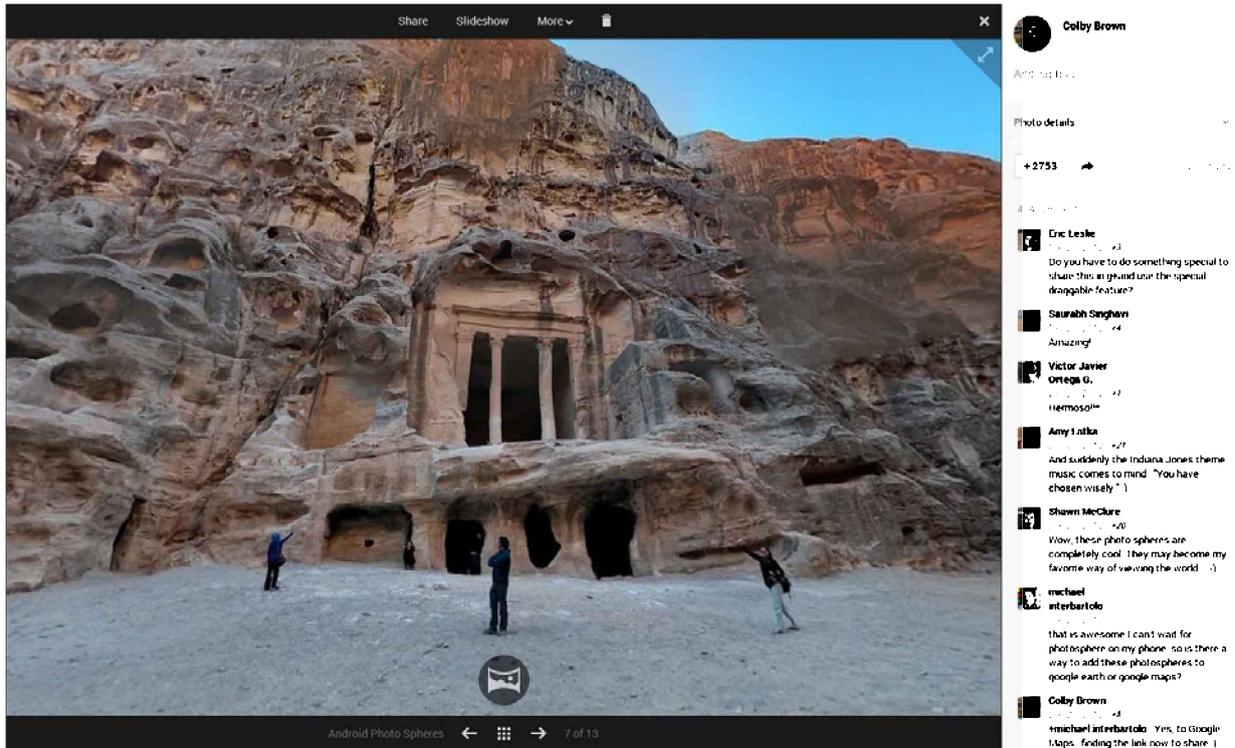


Figure 14

When experienced inside a proper viewer, a Photo Sphere allows you to look all around you.

Originally created by members of the Google Maps team, Photo Sphere gives you the ability to essentially create your own “Street View” scenes that are nearly identical to those in Google Maps and Google Earth.

To begin taking a Photo Sphere, press the Camera Modes button inside the Camera app and select the Photo Sphere icon. The screen will disappear for a second and reappear with a small viewing frame with gray tiles in the background (A). Point your phone toward the area of the scene that you want to use as your starting point, and line up the white dot inside the gray circle that rests in the middle of your screen. It will turn blue as you center in on the dot (B). It will take a few seconds to capture your first image, but then you can freely move about your scene, continuing to line up images based on the first photo you took. As you take more images, the gray tiles in the background of the app are replaced by the photos you are taking, showing you which areas you have left to complete your Photo Sphere (C). You never have to press the shutter button; in fact it has been completely removed from this mode. Instead, simply direct your phone to the other blue dots inside the Photo Sphere app until you have captured the world around you.





To view a Photo Sphere, you need one of the following:

- A Nexus device with at least Android 4.2
- Access to Google+ via any computer (**Figure 15**)
- The Google+ mobile app via Android
- Access to a website or blog with the Photo Sphere viewer embedded on it (which accesses a specific photo album via your Google+ account)

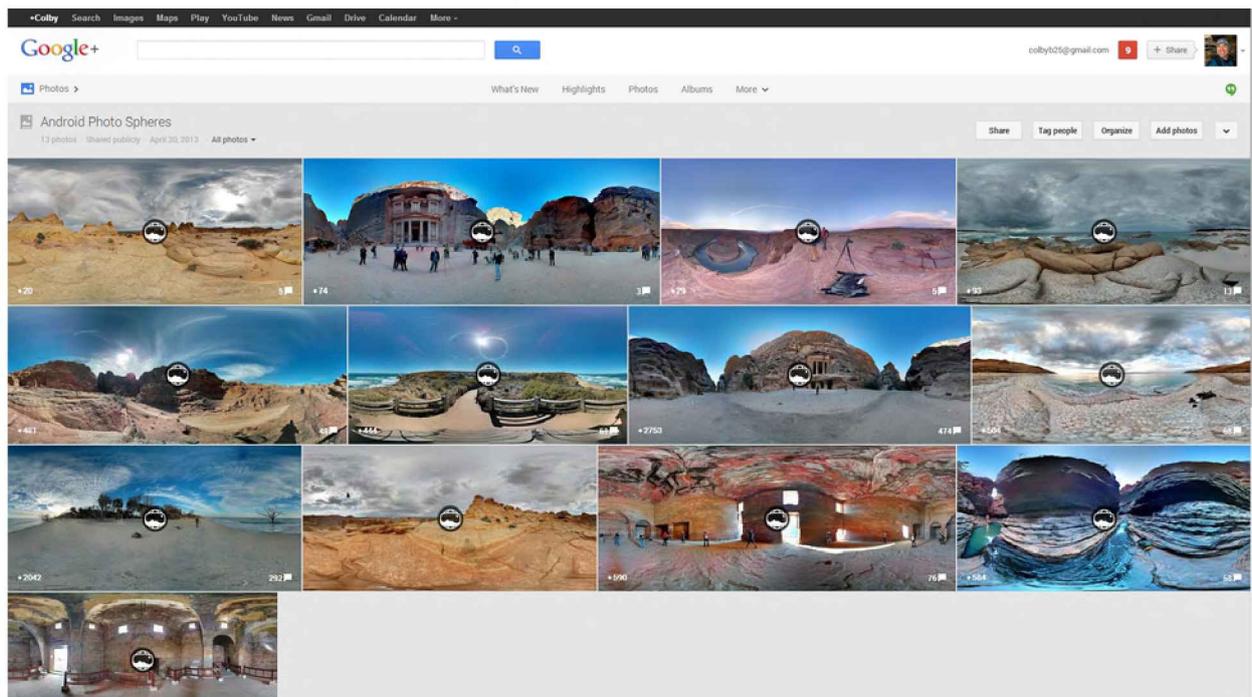


Figure 15

When accessing Google+ via a computer, you can view Photo Spheres in all their 360-degree glory.

Capturing high-quality Photo Spheres can be a challenge. This is mostly due to parallax, which is visual distortion based on a shifting point of origin. For your phone to properly capture a Photo Sphere, it needs to rotate around a single point of origin, rather than moving every time you take a new image. Here are a few tips for capturing your own high-quality Photo Spheres:

- Hold your phone close to your body. Try to rotate in a circle. This will help keep your phone from moving as you capture new images.
- Shoot with your phone in vertical orientation. This will minimize distortion, which can be a problem in horizontal wide-angle photos.
- If you can find an object to hold your phone over, use it. This will help you maintain a single point of origin.
- Take your time. If you are working in a low-light situation, you have to move your camera incredibly slowly; otherwise, your single photos will have motion blur, which will degrade the quality of your Photo Sphere.
- Use a tripod. While this might not be the best solution for many of you, using a tripod is a surefire way to make sure your phone doesn't move from its original point of origin. Even holding your phone over an extended tripod would do the trick. (Later in this book, we will talk about the Joby GripTight tripod mount.)

Viewing Your Images



The Camera app on Nexus devices (Nexus 4, Galaxy Nexus) has a built-in shortcut that allows you to quickly view any images you have taken. Simply hold the phone in the vertical orientation, and slide your finger from the right edge of the screen to the left (**Figure 16**). This swipe allows you to access the Gallery app from inside the Camera app itself. An alternative way is to tap the Gallery app icon in the App drawer.



Figure 16

While in the Camera app, slide your finger from the right side of the screen to the left to pull up the Gallery app and view your images.

In the Gallery app, the screen displays a thumbnail image carousel (**Figure 17**). Swipe from right to left to go to the next image. Swipe from the left to right to return to the previous image you were viewing. If you are at the end of the line, you will return to the Camera app. To delete an image, swipe the image toward the top of your screen. To view an image more closely, tap it with one finger. You can return to the carousel by placing two fingers on your screen (roughly an inch or two apart) and dragging your fingers closer in a pinching motion.



Figure 17

You know you're in the Gallery app when the thumbnail image carousel appears.

You can also zoom in and look more closely at an image (**Figure 18**). This feature is known as “pinch to zoom” and comes in handy when you want to determine whether you have a focused image. To zoom in, put your thumb and pointer finger together on the screen (like you are pinching something) and then stretch your fingers apart; to zoom back out, pull them back toward each other.



Figure 18

You can easily zoom in to an image by using the “pinch to zoom” technique in the Gallery app.

Tips and Tricks

Here are a few tips and tricks to help you make the most out of the photographs you capture with Android’s stock Camera app.

Camera Preview Issue

It is important to note that you are never seeing on your phone’s LCD screen 100 percent of what you are going to capture. The screen shows a wider preview that is closer to an image size ratio of 3:2. The final images you take will have a 4:3 ratio.

The Nexus 4, for example, has an LCD screen with a ratio of 15:9, whereas a standard photograph has a 4:3 ratio. To account for this difference, Android had to crop in slightly on the viewfinder in the Camera app. Every photo you take will contain a small sliver of additional elements in the scene (**Figure 19**). Take this into account when you are composing your shot.



Figure 19

The image you see on the back of an Android camera is cropped in just slightly.

Locking the Exposure

When moving your phone around to adjust composition, you might find that you are not able to get the Camera app to properly expose the image. There are two ways around this:

- Use your finger to press the part of your scene that you want to be properly exposed. This will force the Camera app to adjust the camera settings to capture a correct exposure for that location.
- Press and hold the blue shutter button to lock the current exposure settings. Recompose your image, and then release the shutter button to snap the shot.

These techniques will help when you're working with a scene with tricky lighting.

Experimenting with White Balance

White balance controls the color temperature of your images. The warmer the white balance, the more orange or yellow your image will become. The cooler the white balance, the more blue or magenta your image will become. For most images, the idea is to obtain a natural color balance, although if you are feeling artistic, you can manually set your white balance.

To simplify this process, the Camera app gives you the following white balance options:

- Cloudy. A warm color balance that will add yellow and orange color tones. Best used with sunrise or sunset scenes (A).
- Daylight. A less warm color balance that is meant to balance out the cooler color tone of daytime. Best used when there is a lot of sunlight (B).
- Auto (default). The camera will automatically choose a white balance for you based on what it thinks is the best option for the scene you are looking at.
- Fluorescent. A cooler color tone that is best used when working indoors under fluorescent lights (C).
- Incandescent. The coolest-toned white balance. Best used when working indoors under incandescent lights (D).









Scene Modes

Hidden away in the Settings menu is the ability to choose from a variety of scene modes. With this feature, the phone adjusts the camera settings based on the needs of each scene, such as using a faster shutter speed in the Action scene mode.

Choose from the following scene modes:

- Auto (default). The camera decides what scene mode best fits your scene.
- Action. When you want to capture fast-moving subjects such as sports or a young child.
- Night. When you want to capture a scene that contains a very small amount of natural light.
- Sunset. When you want to capture a sunrise or sunset.
- Party. When you want to capture people in low-light scenes.

Third-Party Camera Apps

One of the best things about Android is that you can easily find replacement apps for any of the applications that come standard on your phone. There are a number of great camera apps that are worth checking out if you feel that the stock Camera application is not fitting your needs. Here are two of my favorite apps, which you can download from the Google Play app store:

Camera FX



Camera FX (**Figure 20**) comes with powerful features such as shooting 10 frames per second, live previews of filter effects, focus metering, ISO control, and spot metering modes.



Figure 20

Camera FX on the HTC One

Camera 360 Ultimate



Camera 360 Ultimate (**Figure 21**), by PinGuo Inc., is an incredibly popular camera app for Android. With it, you can add multiple filters to photos, control metering modes, and even add tilt-shift effects to your images.



Figure 21
Camera 360 Ultimate on the Galaxy Nexus 4

Mastering Androidography

Now that you have a good understanding of the features and functions of the various camera apps, it is a good time to give you a little insight into capturing better photographs. While the technology might be different, the same principles apply whether you are using a professional DSLR or an Android mobile device.

Portraits

Like most genres of photography, portraits are about good lighting. A strong portrait is generally created when your subject makes eye contact with your camera and is illuminated by soft natural light. Follow these tips to take your portrait images to the next level:

- Fill the frame with your subject, but leave enough breathing room around the frame edges.
- Shoot in locations where you have even light. This could be under a shaded overhang, or indoors close to a window with plenty of daylight.
- Connect with your subject. Make them laugh. Have fun with them. A subject who doesn't feel awkward that you have a phone in their face will give you better images to work with.
- Use the limitations of your Android phone to your advantage. When you're shooting in low-light situations, try moving the camera as your subject moves, depicting motion by allowing a bit of blur to appear.

Figures 22 and 23 show two of my favorite recent portrait images.



Figure 22

My son listening to music through headphones for the first time. I wanted to capture the raw expression on his face, which is why I filled most of the frame with his head. I shot at an angle to give the image a little more flavor, and I made sure to leave enough room surrounding my subject.



Figure 23

An Australian tour guide holding an echidna. This is what is called an “environmental portrait,” as it captures the subject in their environment.

Landscapes

Beautiful landscape photography is not about how much you can fit into a scene, but about how simple you can make your composition. Too many photographers get overly excited when it comes to an amazing landscape scene, which leads to the desire to capture all of it in a single image. The key is to isolate and simplify your images, allowing the viewer to concentrate on fewer elements. Follow these tips to take your landscape images to the next level:

- The best light for landscape work can be found during the “golden hours”: within an hour of sunrise and sunset. But if you have stormy or overcast skies, shooting during the day can be rewarding as well.
- Simplify your composition by isolating the strongest elements.
- Don’t be afraid to shoot in the vertical orientation to grab a unique shot.
- Try to get off the beaten path every once in a while. A beautiful and relatively unvisited location might be just a mile or two hike into the woods.

Figures 24 and 25 show two of my favorite recent landscape images.



Figure 24

The Kirkjufell waterfall in Iceland. By isolating the series of waterfalls and including a small human element, I was able to provide a sense of scale and energy.



Figure 25

In the southwest corner of Bolivia is the Eduardo Avaroa National Reserve, where you can find a string of high-altitude lakes. Each lake has its own mineral consistency, coloring some red or green.

Travel Photography

I bring my cell phone with me on my adventures around the world. It is great to have a small and powerful camera that doesn't attract the same kind of attention that my DSLR does. Travel photography in general is all about the location. If you can capture elements of a culture, event, or country and embody them in a single image, you have done a good job. Follow these tips to take your landscape images to the next level:

- Study your surroundings. Often you will want to include or exclude certain compositional elements to better showcase the atmosphere of a location.
- Do your research before you land in a new location. Many of the best scenes are locations that are a little hard to find, especially if you are relying on luck in the first place.
- Adding a human element for scale can help show just how big a structure truly is.
- Don't be afraid to walk up and start talking to strangers. Some of my best travel portraits came after sitting down for a conversation first.

Figures 26 and **27** show two of my favorite recent travel images.



Figure 26

When visiting Jordan, you must stop by the ancient city of Petra. I photographed my first glimpse of the “the Treasury” as a Bedouin and his camel sat at the base of the structure. This added a sense of scale to the image, giving the viewer a better sense of the size of the building carved into the wall.

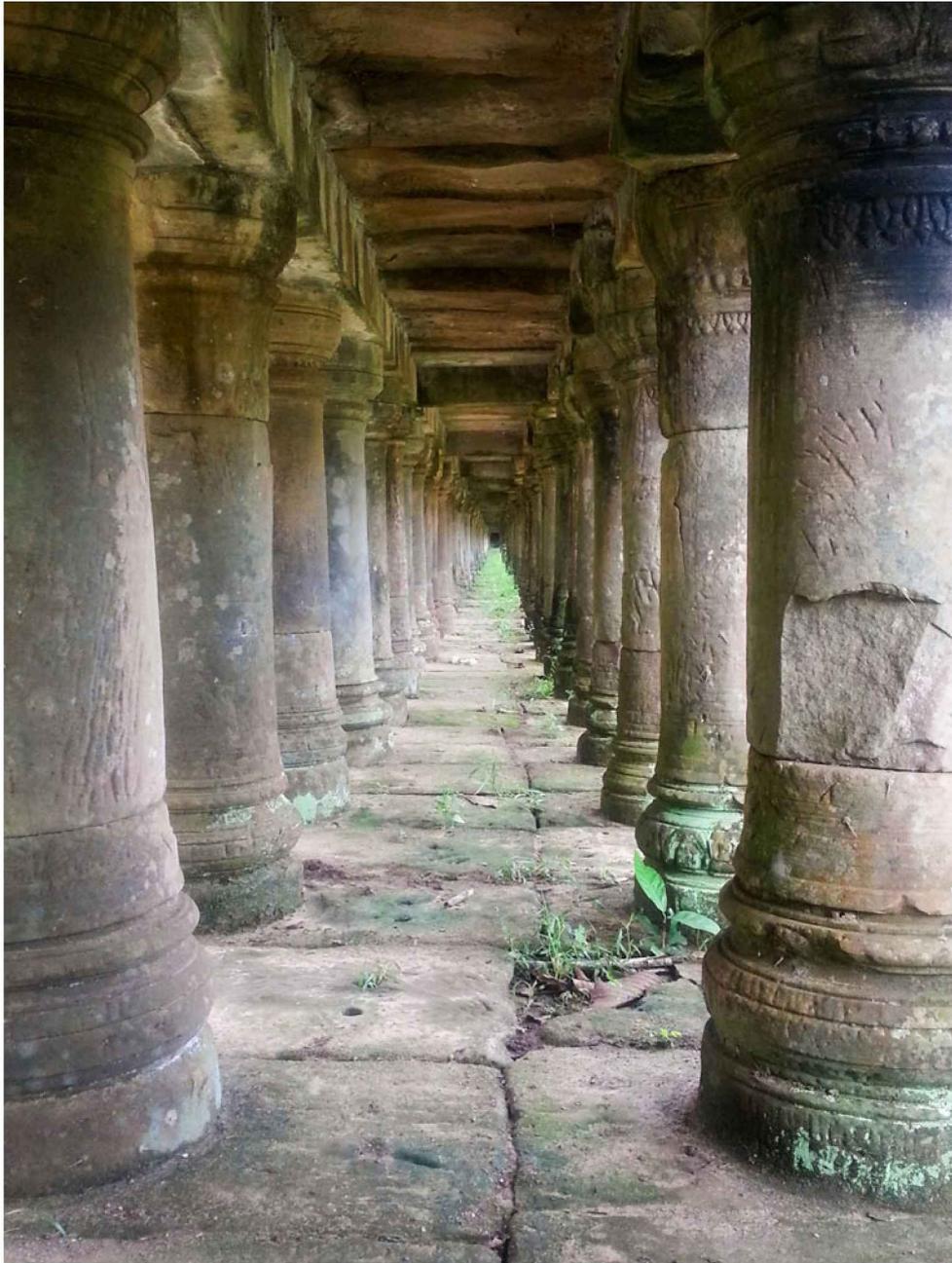


Figure 27

Angkor Wat is one of the oldest religious temple complexes in the world. If you look hard enough, you can find an abundance of isolated and unique compositions in the old stone structures. This photo was taken under a footbridge and composed in such a way that the columns on either side of the path act as a frame within the frame.

Low-Light and Night Photography

When it comes to mobile photography, nearly every device struggles to produce great low-light images. This is in part because of the limitations of the sensors in mobile phones, which can be as small as the tip of your pinky finger. New technology, such as that found in the HTC One, is beginning to allow Android phones to take quality images that previously would have been nearly impossible.

Follow these tips to take your low-light and night images to the next level:

- Use a tripod. The Joby GripTight, featured at the end of this book, can help with this.

- Use a camera application with a timer, allowing you to set your phone on a tripod and avoid the additional camera movement that comes from pressing the shutter button.
- If you don't have a tripod, brace yourself against a sturdy object, such as a wall or railing.
- Control your breathing if you are attempting to hand-hold a low-light photo. Take three breaths, and then hold the fourth as you snap the shot. This might alleviate additional movement.

Figures 28 and 29 show two of my favorite recent low-light images.



Figure 28

In Lower Antelope Canyon, just outside Page, Arizona, are amazing rock formations with gorgeous light reflecting down the canyon walls. Because the light is so soft, it is often challenging to get great mobile images. For this shot, I braced myself against a wall and held my breath. This allowed me to capture an incredibly sharp low-light image of a beautiful subject.

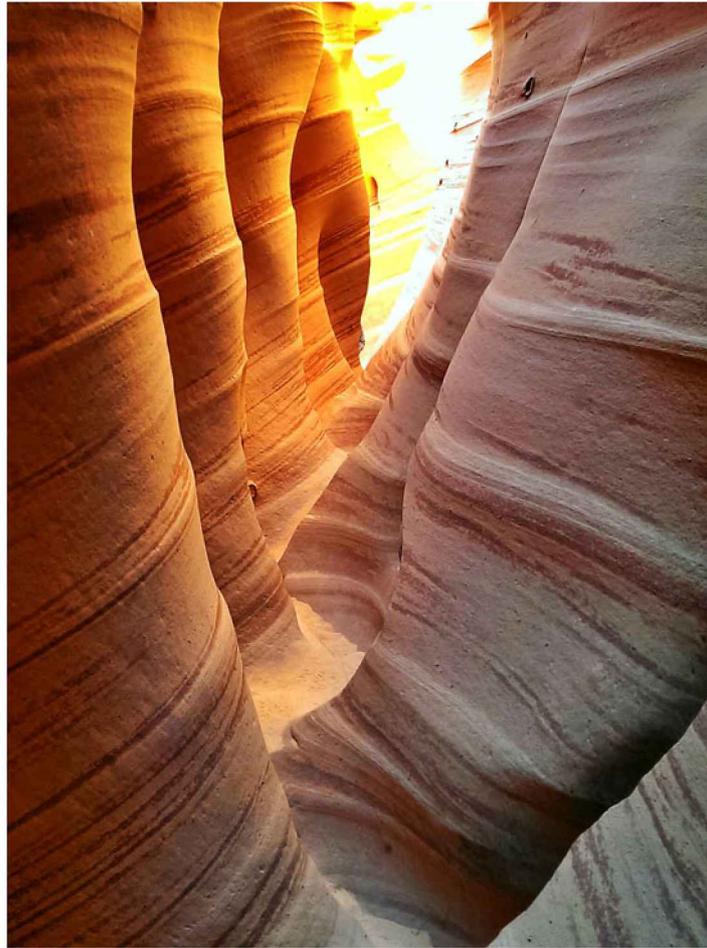


Figure 29

Just outside Escalante, Utah, you can find Zebra Canyon, a beautiful slot canyon located a few miles off a dirt road. As the sun rose, the light in the canyons changed, allowing for a variety of compositions. To take this photo, I placed my camera on a tripod using the Joby GripTight mobile phone mount.

Sports/Wildlife

Nearly all mobile phones struggle with sports and wildlife photography as well. Why? Because mobile devices don't allow you to zoom in close to the action. Even when you're using attachable mobile lenses or a camera app that allows you to zoom in, the quality is sadly pretty low. To overcome this challenge, you need to let the action come to you.

Follow these tips to take your sports/wildlife images to the next level:

- Let the action come to you. Since you can't zoom in closer to your subject, you need to position yourself close enough to catch the shot.
- Use a camera app that supports a burst mode. When engaged, this mode allows you to take up to 10 images a second, ensuring that you don't miss "the shot."
- When you're shooting wildlife, turn off any sounds that might come from your phone. They could scare away your subject.

Figures 30 and 31 show two of my favorite recent sports/wildlife images.



Figure 30

Australia is home to some of the most deadly species in the world. Every time I visit, I have at least a few encounters with spiders as large as my hand, though this one is actually harmless. When shooting “wildlife” with your Android phone, you have to get really close to the action—which can be scary!



Figure 31

As a photographer, I totally consider photography a sport. In this shot, photographers from around the world line up to photograph the iconic Zabriskie Point.

Editing Your Images

In the digital age of photography, postprocessing your images is just as much an art form and a necessity as capturing them in the first place. With Android mobile devices, you have a wide variety of photo editing options, including some very powerful third-party applications that you can download from the Google Play app store.

Android Photo Editing App

Built into the Gallery app is a great photo editing application. To begin editing a photo in the Gallery app, press the icon that looks like three black and white circles overlapping each other. It can be found in the lower-left corner of your screen (**Figure 32**) when you're viewing an image.



Figure 32

When you're viewing an image, the photo editing app is accessed by pressing the icon in the lower-left corner of the screen.

You will notice that the app is broken down into four sections: Filters, Frames, Cropping & Straightening, and Adjustments. Save your edits at any time by pressing the Save button in the upper-left corner of your screen. To share an image, press the icon with three connected dots at the top of the screen. You can also access Undo, Redo, Reset, and Show History by pressing the menu icon in the upper-right corner.

Filters

The Filters section (A) is the default section you land on. Here you can apply pre-made filters such as Vintage, B&W, and Punch. To remove all filters, select None.

Frames

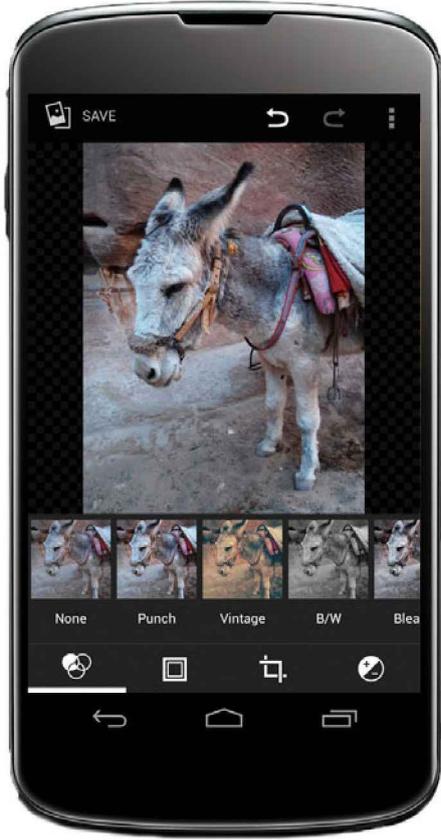
The second section from the left is Frames (B). Here you can add a variety of white and black frames to your images.

Cropping & Straightening

Third from the left is the Cropping & Straightening (C) section. Here you can straighten out a horizon line, crop in on your image, rotate an image, or mirror an image.

Adjustments

You can apply photo adjustments and enhancements in the Adjustments (D) section. Add exposure or contrast, adjust the shadows and highlights, or even make localized adjustments (brightness, saturation, contrast).







Before & After

The best feature of the built-in photo editor is the ability to see a live before-and-after version of your image as you are editing it (**Figure 33**). To engage this feature, simply slide your finger left or right across your image while in the editing app.

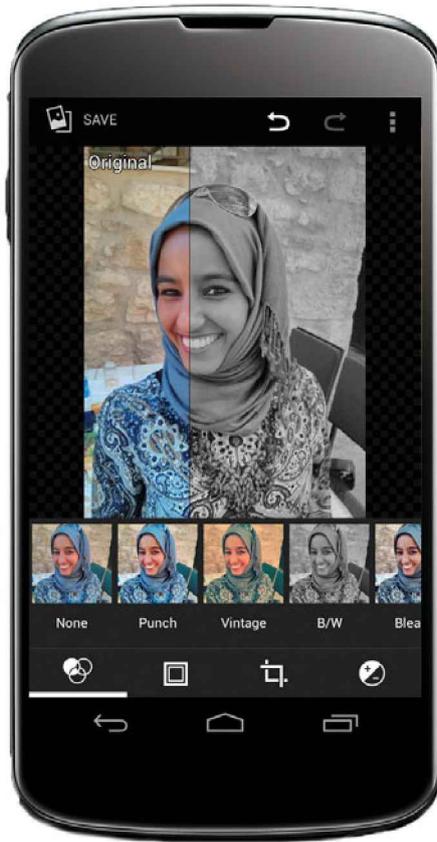


Figure 33

Swipe left or right on an image in the photo editing app to see a live before-and-after preview.

Snapseed



In September 2012, Google bought Nik Software, creator of one of the most robust and powerful mobile photo editing applications available: Snapseed. Google has made Snapseed free to download from the Google Play store, which I highly recommend you do.

Figure 34 shows the layout. At the top of your screen are four gray icons; from left to right, they are Save, Share to Google+, Open New Photo, and the Menu icon. The main portion of the screen showcases the photo you have selected. At the bottom of the screen, a series of icons represents the photo editing adjustments you can make. There are 14 in all, so don't forget to swipe from right to left to view the other options. (If you are holding your phone in the horizontal orientation, these icons will be on the left side of your screen and you will need to swipe down to see the additional adjustments.)



Figure 34

The Snapseed app is a powerful tool that allows you to creatively edit your images. I highly recommend it.

The first time you open the application, you should be greeted with an instructional overlay that shows you how to use the app itself. Press any of the 14 photo editing adjustments to see a brief overview of how that adjustment works (Figure 35). I'll focus on a few of my favorites.



Figure 35

The instructional overlay is visible the first time you open an adjustment. To recall these instructions, select an adjustment and then press the ? icon in the upper-left corner of your screen.

Selective Adjust



One of the most important lessons I learned while perfecting my photo editing skills was the value in making selective adjustments. In reality, it's rare that I want to add contrast to every pixel in an image or increase the saturation for all colors. With Snapseed's Selective Adjust, I can apply brightness, contrast, and saturation to specific areas of my images, rather than making the adjustment to the entire photo.

Inside Selective Adjust, you will find a + icon at the bottom of your screen. When you press it, it will turn blue to indicate that it is selected. Now tap a spot on your image where you would like to add saturation, brightness, or contrast (**Figure 36**). The pin represents the area that will be affected by the adjustment. If you pinch two fingers together or spread them apart while touching the screen, you will increase or decrease the size of the affected area. When you do this, the affected area will turn red (**Figure 37**), making sure you know exactly where your adjustments will be felt. The pin is pulling information such as color tone from your image, which determines what other pixels will be affected. For example, if you want to increase the saturation of the yellows in your photo, place a pin on top of a yellow area. As you enlarge the affected area, it will look for yellow pixels to adjust.

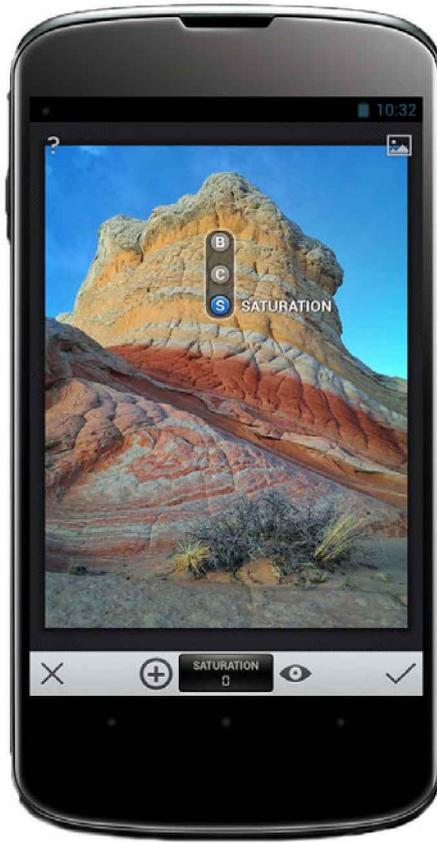


Figure 36
Selective Adjust

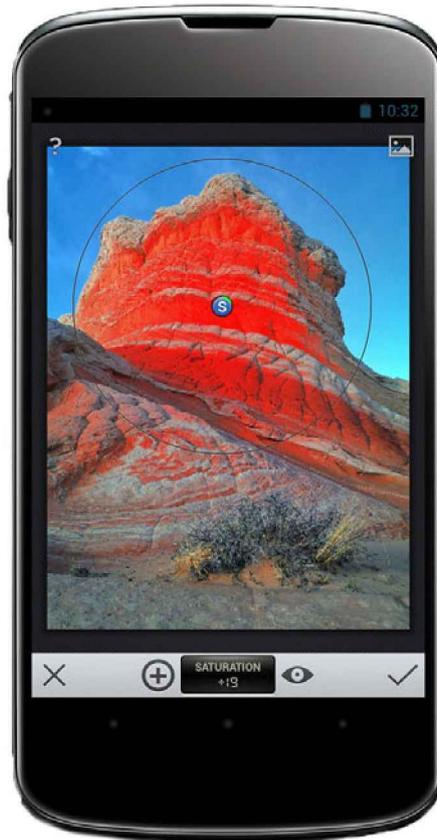


Figure 37
Adjusting saturation in Selective Adjust

Tune Image



When you need to make global adjustments to every pixel in an image, use the Tune Image adjustment. Here you will be able to adjust the following variables:

- Brightness. Increases or decreases the exposure levels.
- Ambience. Adjusts a special type of contrast that controls the balance of light in a photo.
- Contrast. Controls the contrast of an image (making darks darker and lights lighter or vice versa).
- Saturation. Affects the saturation, or vibrance, of colors.

- White Balance. Adjusts the color balance and color tones in your image.

To select an adjustment, swipe up or down (**Figure 38**). Then swipe right or left to increase or decrease, respectively, the effect of the adjustment.



Figure 38

One of my favorite effects in Tune Image is Ambiance. It can really help balance the light of an image.

Grunge



If you want to add a little artistic flavor to an image, use the Grunge adjustment. It allows you to add a layer of texture over your images, giving them a unique and artistic feel. You can adjust the following variables (**Figure 39**):

- Style. Changes the color distribution throughout the photo.
- Brightness. Brighten or darkens the image.
- Contrast. Controls the contrast of an image (making darks darker and lights lighter or vice versa).
- Texture Strength. Controls the visibility of textures in the image.
- Saturation. Affects the saturation, or vibrance, of colors.



Figure 39

Adjusting contrast in Tune Image

I recommend that you let the app shuffle, or randomize, the Grunge effect; then make your adjustments once you have found a look you like. To do this, press the Shuffle icon in the toolbar at the bottom of the screen.

Photos Edited with Snapseed

Snapseed is one of the best photo editing apps for Android, and it is currently my favorite. Here is a small collection of images that I edited with Snapseed.



The monastery in Petra, Jordan. This photo was edited using Selective Adjust, Tune Image, and Detail adjustments.



Botany Bay, South Carolina, at sunset. I used Selective Adjust to increase the contrast and saturation in the sky and then added some ambience in Tune Image.



Lower Antelope Canyon near Page, Arizona. I used Selective Adjust to add contrast and saturation to parts of the image, and I increased the sharpness via the Detail adjustment.



The ancient temple ruins of Angkor Wat in Cambodia. I added contrast and saturation with the Tune Image adjustment and then applied a light texturing with the Grunge effect.



A horse in Iceland. I started out with the Grunge adjustment to add some texture, and I increased the contrast and ambience in the Tune Image adjustment. I then used Selective Adjust to darken the foreground while pulling out the shadow details in the horse's face.

Third-Party Photo Editing Apps

In the Google Play store, you can find a number of great photography applications that can help you organize, share, and edit your images. Here are three third-party photo editing apps that I use on a regular basis.

Afterfocus Pro



Created by MotionOne, Afterfocus Pro is a great app that allows you to create DSLR-style blurred-background photos with ease. With any mobile device, your depth of field is limited. This app allows you to create compelling images by controlling what's in focus and what's in the background (Figure 40). From there you can fine-tune the settings to suit your needs (Figure 41).

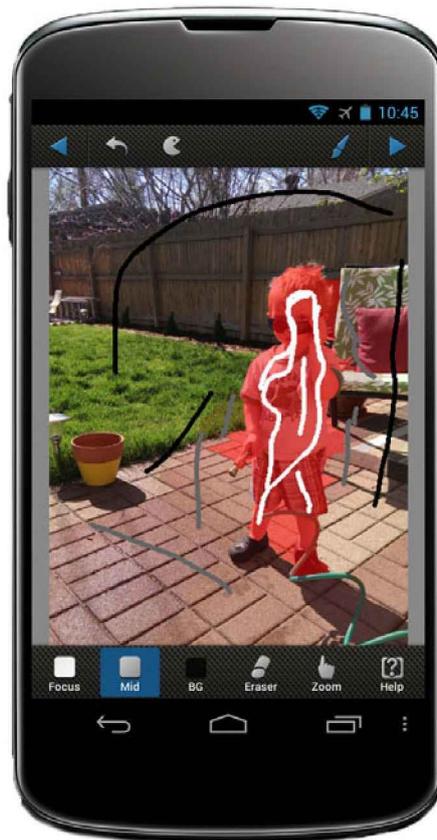


Figure 40

Tell the app which parts of the image should be in focus and where you would like DSLR-quality blur.

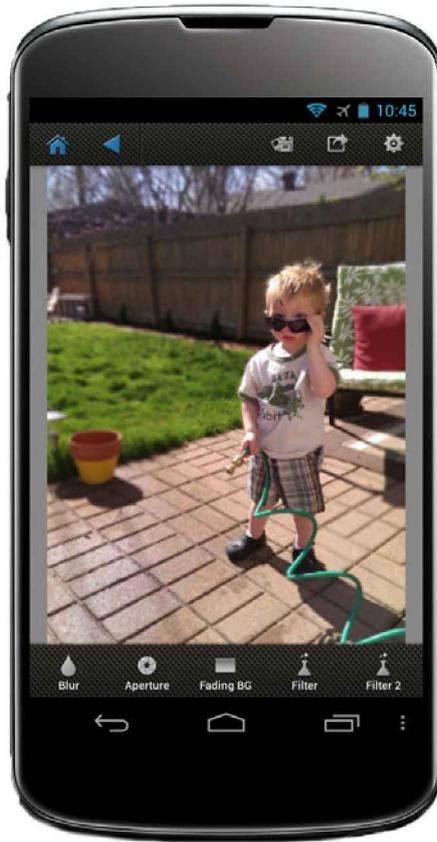


Figure 41

The resulting image can then be fine-tuned to fit your focusing needs.

Photoshop Touch



There's a good chance you've heard of the top photo editing application on the market, Adobe Photoshop. The Photoshop Touch app (**Figure 42**) is now available for Android devices. With it, you can use the popular features of the desktop app, such as layers, selection tools, adjustments, and filters. It will also sync your images with Adobe Creative Cloud (assuming you have an account), allowing you to start editing an image on your phone, and then seamlessly transition to your desktop computer once you arrive home.



Figure 42

The Photoshop Touch app allows you to make very advanced photo edits in the palm of your hand.

Touch Retouch



One of my favorite Android photo editing apps is Touch Retouch by ADVA Soft. It allows you to easily remove distracting elements from your image, such as a rock, a power line, or even a person (**Figure 43**). Simply paint over the area you wish to remove (**Figure 44**), and then hit the Start button in the toolbar at the bottom of your screen (**Figure 45**). The app can help you remove most simple objects from your images, and it even does a good job removing larger and more complicated elements.

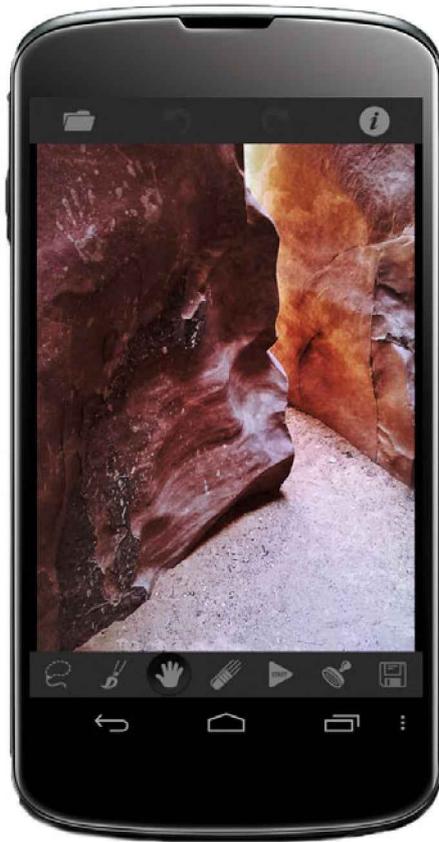


Figure 43
The original image in Touch Retouch.



Figure 44

Paint over the elements that you wish to remove.



Figure 45

Press the Start button in the bottom toolbar, and the app will remove the elements you painted over.

Sharing Your Images

The reason many of us use our mobile devices to take photos is to share them with others. Unlike with the photos that come from my expensive DSLR, I can easily capture, edit, and share mobile images all within minutes.

Let's look at the options for uploading and sharing your images with your Android device.

Basic Sharing

This section walks you through the process of sharing an edited photo straight from the Gallery app to an email.



Step 1
In the Gallery app, press the words "Filmstrip view" to change to Grid view.



Step 2
Select an image by tapping it, allowing it to fill the screen.



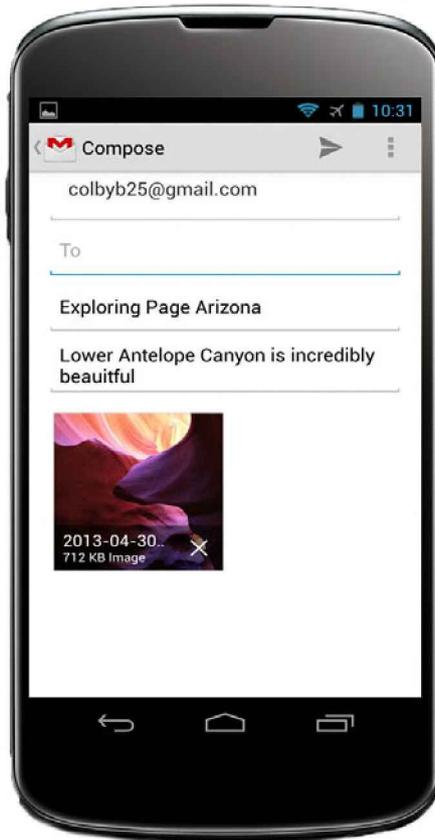
Step 3

Tap the Share menu (represented by three dots connected by lines), and select the app you wish to share your image with; in this case, Gmail.

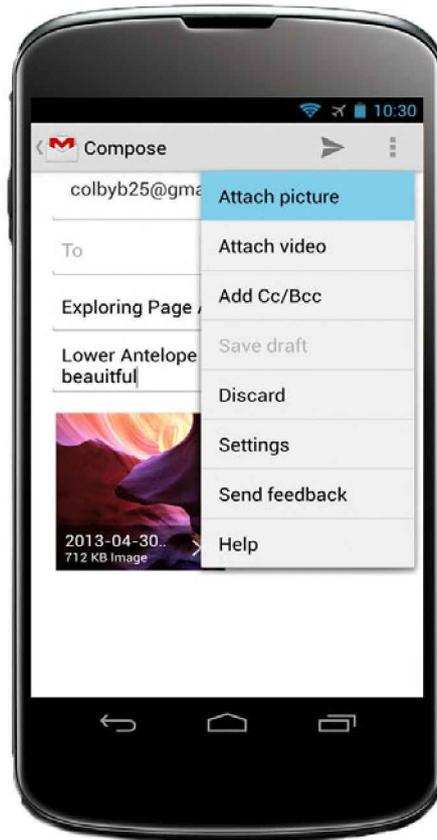


Step 4

To share multiple photos, return to Grid view in the Gallery app and tap the Gallery menu button (three gray dots in the upper-right corner). Then tap Select Item to begin choosing two or more photos to share at once.



Step 5
The photo is attached to the email.



Step 6

To add more images to this email, press the Gmail app's menu icon (three gray dots in the upper-right corner) and select Attach Picture.

You can follow these same steps to share photos to any social media platform, such as Twitter, Google+, or Facebook.

How I Share My Photos

I share my mobile photography with a variety of online social networks. While you may choose to focus on one location, I prefer to spread my images far and wide using a mixture of Google+, Facebook, Twitter, and Instagram (**Figure 46**).

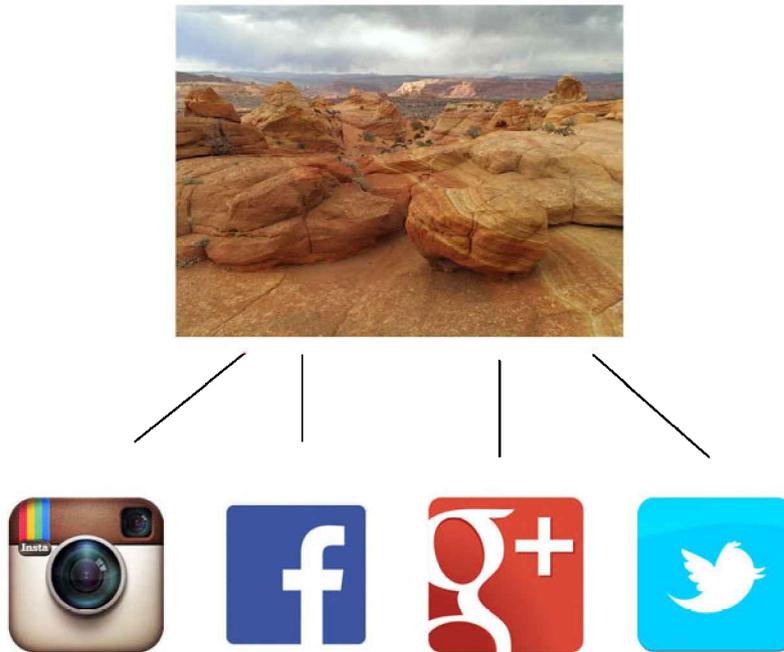


Figure 46

The four social networks I focus on are Instagram, Facebook, Google+, and Twitter.

Each of these platforms is unique, with its own feature set and demographic. My followers on Instagram respond differently to a post than my followers on Google+. Over the years, I have learned which images work best for which platforms, and what time of day is the best to post. It is good practice to pay attention to the social networks you regularly post to and find your own strategies for success.

Understanding Auto Backup

Many social platforms – such as Google+, Facebook, and even Dropbox – now allow you to instantly upload every mobile image you take to their respective networks. While most allow you to decide if you want to upload images only when you are connected to Wi-Fi, you can also choose to upload using your cell service, meaning that your photos are available for you to share right away.

It is important to note that no one can see these images. They are simply uploaded to a private location on the network. This is a handy feature to have enabled if you ever lose your phone, as all of your images will be stored online. I upload all my mobile images to all three major services. It makes sharing images even easier (especially while on the road), and it is always nice to have the peace of mind that I will never lose a shot.

To set up instant upload, find your way to the app settings menu and turn it on (**Figures 47, 48, and 49**).



Figure 47

On Facebook, the service is called Photo Syncing; turn it on via the settings menu.



Figure 48

The Google+ Auto Backup settings are near the bottom of the main Google+ settings menu.



Figure 49

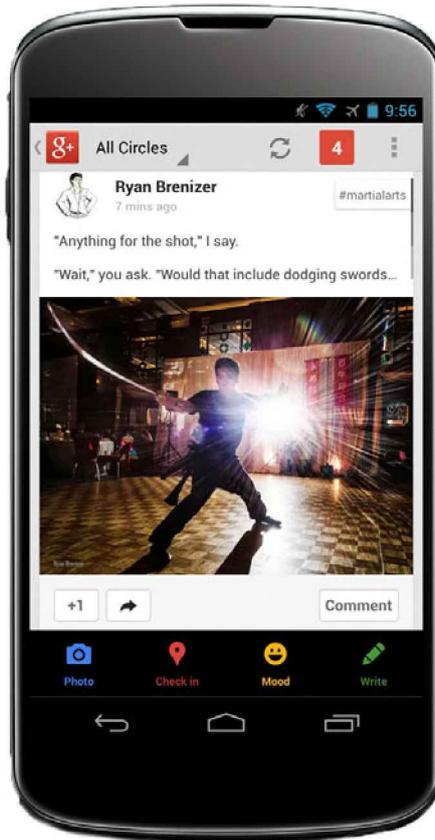
Although not a social network, Dropbox is used by many professionals for storing personal and business data. Now you can use it to store your mobile images as well.

Google+



Think of Google+ as the digital membrane that ties all Google products together. Google+ now ties into Android, Gmail, Google Calendar, YouTube, Google Maps, and many other Google services. On top of that, it has a thriving and engaging photography community that loves sharing and consuming content. The Google+ mobile application is arguably the best of all of the social networks, as it has a very fluid user interface that puts an emphasis on the visuals – meaning your images will look good, even when viewed on another mobile device.

Follow these step-by-step instructions to post a photo to Google+.

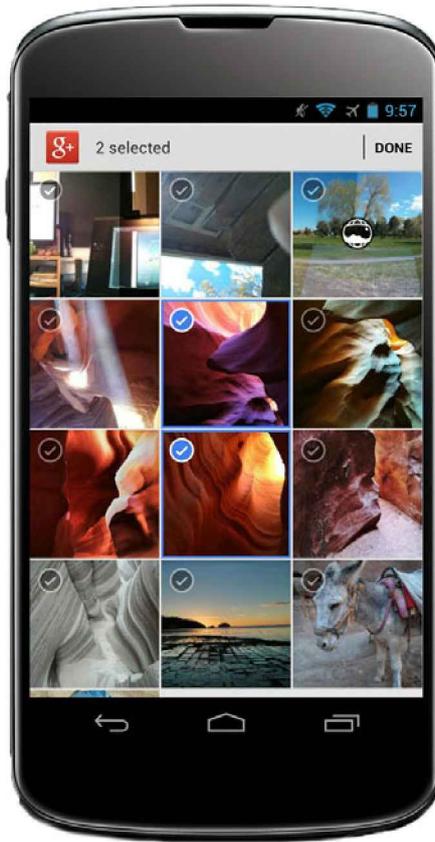


Step 1
In the Google+ app, tap the Photo icon in the navigation bar at the bottom of your screen.



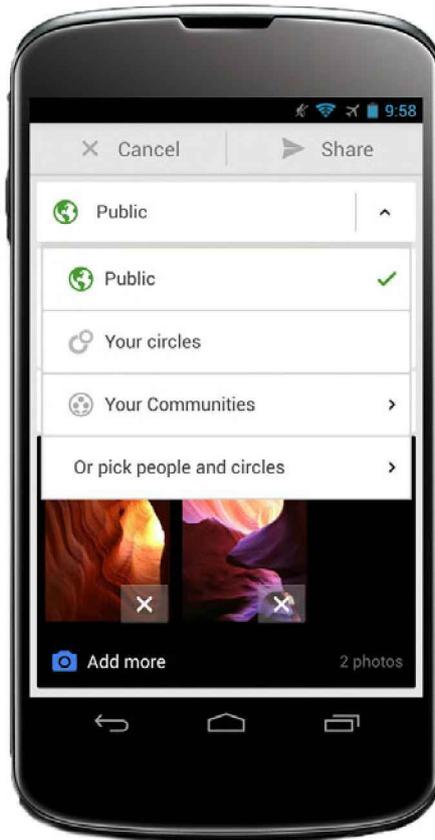
Step 2

You should now see a number of image thumbnails. These images have already been uploaded to Google+ through the Auto Backup feature. To share a photo that is not already in your Auto Backup folder, tap the first thumbnail, titled Camera.



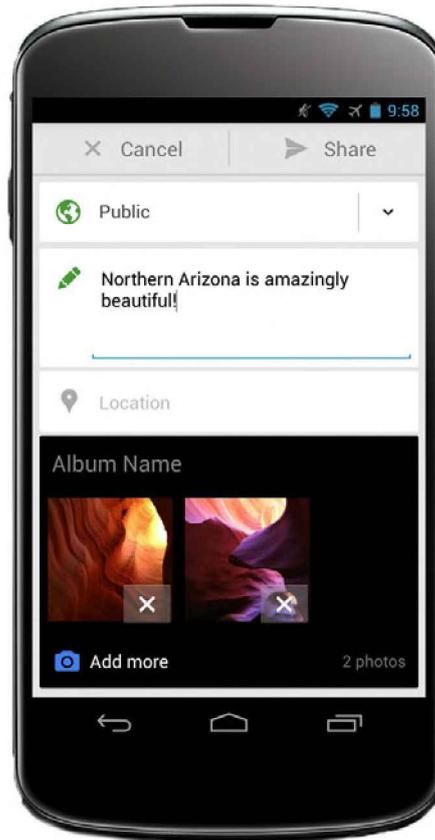
Step 3

Select the image(s) you wish to share; a blue check mark will appear above each selected photo. When you are ready, press Done in the upper-right corner of your screen.



Step 4

You are now in the Publish Post box on the Google+ mobile app. Choose the Google+ circles (groups of users you follow) you wish to share to. If you want your image(s) to be visible to everyone, select the Public circle.



Step 5

Fill out the description box for your post. Know that *all* public posts on Google+ show up in Google search results, so include any necessary keywords in your post to get more eyes on your images.

If you're still in the place where you took the photo, you can also attach a GPS location to your post. This feature is limited, however, as it has a short radius of functionality. For example, if I am in Denver when I post an image I took in San Francisco, I would not be able to geo-tag it.

Tap the Share button in the upper-right corner of your screen to publish your image to Google+.

Auto Enhance and Auto Awesome

Hidden inside the Google+ settings menu are two great features that can improve the quality of the images and content you share.

- **Auto Enhance.** Allows Google+ to analyze your photos as you upload them. It then optimizes the brightness, contrast, details, noise, and focus to help the image pop and stand out. Having this feature on will not overwrite the original images you upload. You can also turn it on or off once an image has been uploaded.
- **Auto Awesome.** Allows Google+ to pull anywhere from 5 to 50 images together to form an animated GIF, HDR, panorama, or photo booth-style image that you can share. Just upload the images together, and Google+ will do the rest for you.

Facebook



When you think of social networks, Facebook is generally number one. Why? It is by far the largest social network on the Internet, with well over a billion users across the globe. Many photographers have found success with Facebook—especially event, wedding, and portrait photographers, where the viral nature of sharing content with friends and family really comes into play.

Facebook has worked hard to create a more compelling mobile app, but although it is faster and more efficient than before, it still falls behind the aesthetics of the Google+ Android app.

Follow these step-by-step instructions to post a photo to Facebook.



Step 1
In the Facebook app, tap the Photo button in the navigation bar near the top of your screen.



Step 2
You should now see a number of image thumbnails. These are images that have already been uploaded to Facebook.



Step 3

Select the image(s) you wish to share. Selected images gain a green check mark. You can also easily tag something anywhere in a selected image by tapping it. When you are ready, press the blue Compose icon in the lower-right corner.



Step 4

You are now in the Compose Post box on the Facebook mobile app. Enter any text you want to accompany your post. The five icons at the bottom of the screen allow you to (from left to right) tag someone in a post; select the location where the photo was taken; add additional photos to the post; select the album the image should be placed in; and choose who to make your post visible to. When you are ready, press the blue Post button in the upper-right corner.

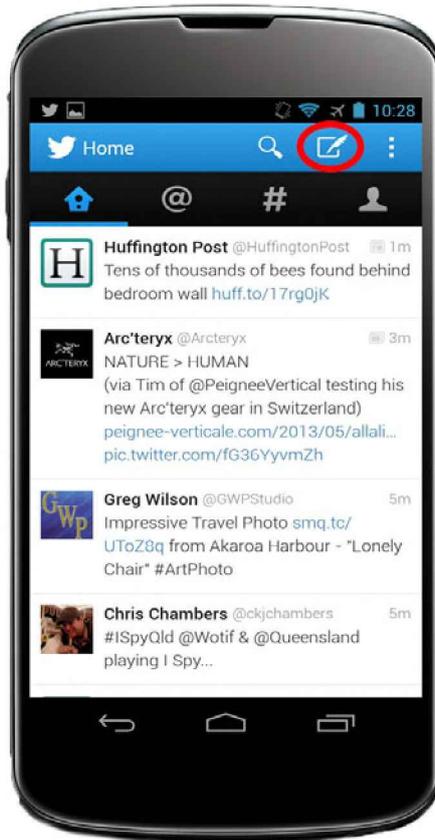
Twitter



When it comes to mobile social interaction, Twitter is considered by many to be king of the hill. This mostly comes down to the 140-character limit for a Tweet, which not so coincidentally is the exact limit for a text message. Twitter has become a hot spot for the discovery of breaking news, and it provides direct communication pathways between consumers and companies. Twitter uses hashtags to help you search for keywords in a tweet. They are indicated by the hashtag symbol (#), as in #coloradophotography or #sunset.

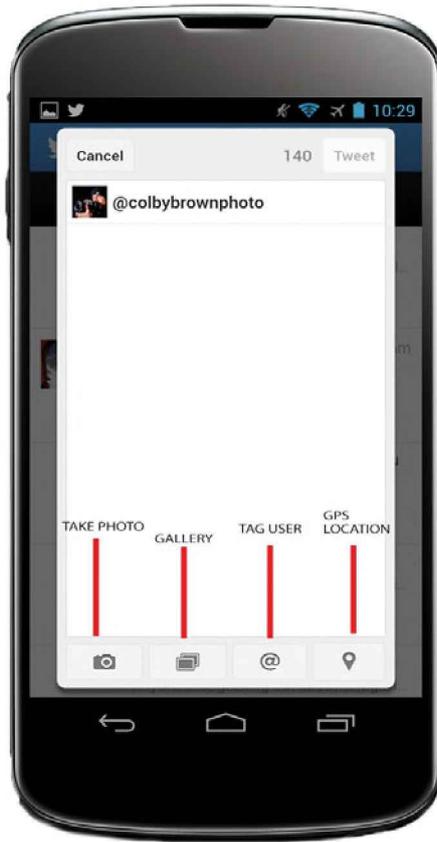
As a photographer, I use Twitter as an incredibly simple, albeit limiting, means to share an image or other content with my followers. No more worrying about what to say in a two-paragraph introduction to a Facebook post, as I have only 140 characters to tell my story.

Follow these step-by-step instructions to post a photo to Twitter.



Step 1

In the Twitter app, tap the Compose icon in the navigation bar at the top of your screen.

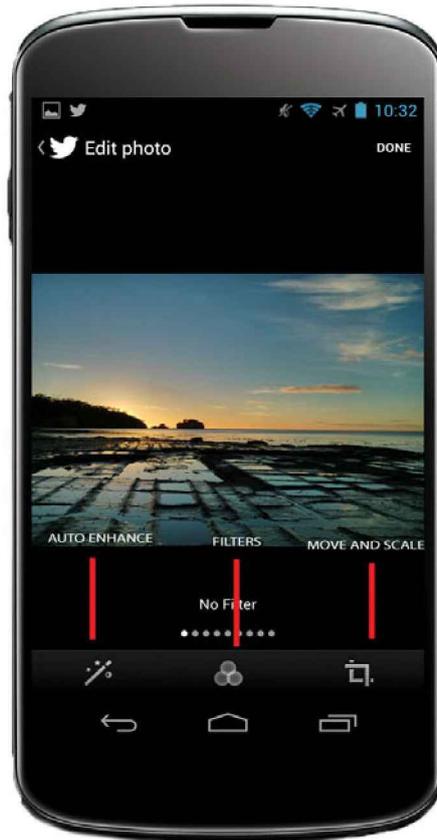


Step 2

You will now see the first stage of your Tweet. Press the Gallery icon at the bottom of the screen.

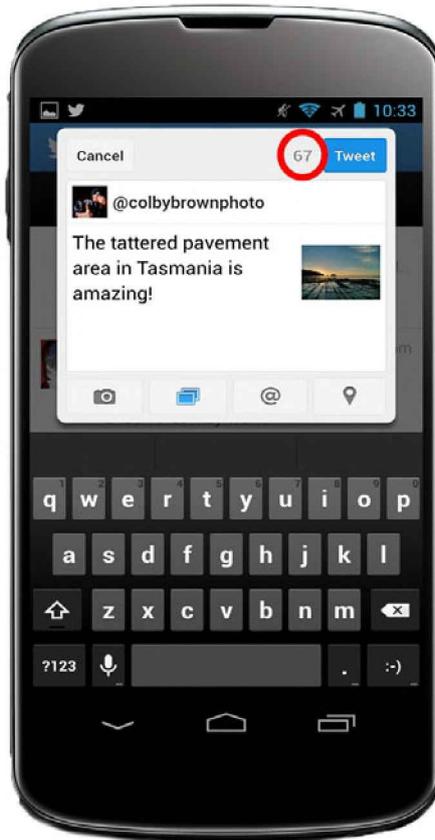


Step 3
Press the Camera thumbnail to bring up a scrolling list of your images. Select the image you wish to share by tapping it.



Step 4

Inside Twitter, you can edit any images you upload. At the bottom of the screen are the icons for, from left to right, Auto Enhance, Filters, and Move and Scale. Once you have applied adjustments, press the white Apply button in the upper-right corner.



Step 5

Add text to accompany your tweet, and don't forget to include any necessary hashtags. Keep an eye on the character counter at the top of the screen. The link to your photo will take up a set amount of characters, so you will need to try to make it all fit. When you are ready, tap the blue Tweet button.

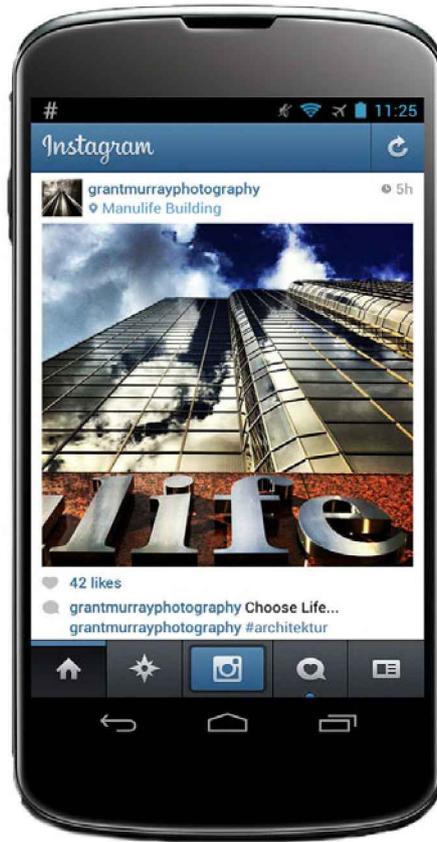
Instagram



If you are looking for an easygoing social network to share your mobile images, look no further than Instagram. After having been around for less than 18 months, the mobile photo-sharing network was purchased by Facebook for a billion dollars. If Facebook is willing to spend that amount of cash on Instagram, you know it was for a reason. At the time of this writing, Instagram has over 100 million active users and is still growing strong. Since the platform is geared toward simple forms of interaction (you can only like or comment on a photo) and every image is limited to a perfectly square image ratio, it's easy to jump in headfirst and start having some fun.

Like Twitter, Instagram utilizes hashtags, allowing you to add keywords to any image you post and, hopefully, helping others find the content you are sharing. The key is to make sure they're relevant—don't use the hashtag #australia on a photo taken in Chicago.

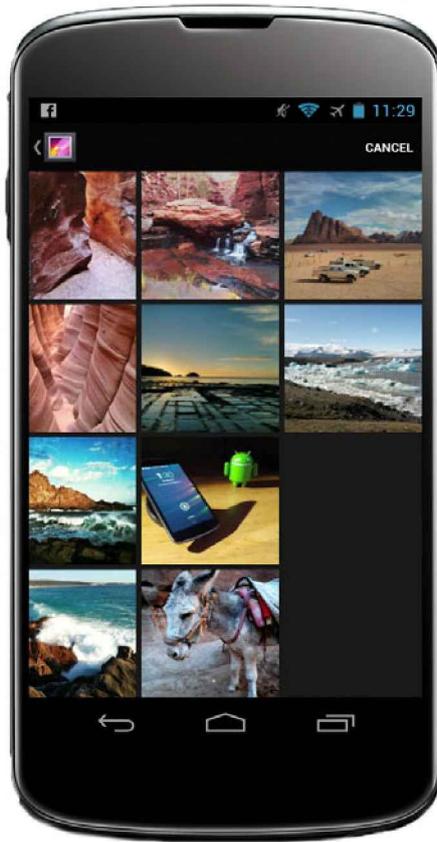
Follow these step-by-step instructions to post a photo to Instagram.



Step 1
In the Instagram app, tap the blue camera icon in the middle of the navigation bar at the bottom of your screen.



Step 2
Take a photo, or tap the Gallery icon in the lower-right corner.



Step 3
In the Gallery, select the Camera album, find the photo you wish to share, and tap it.



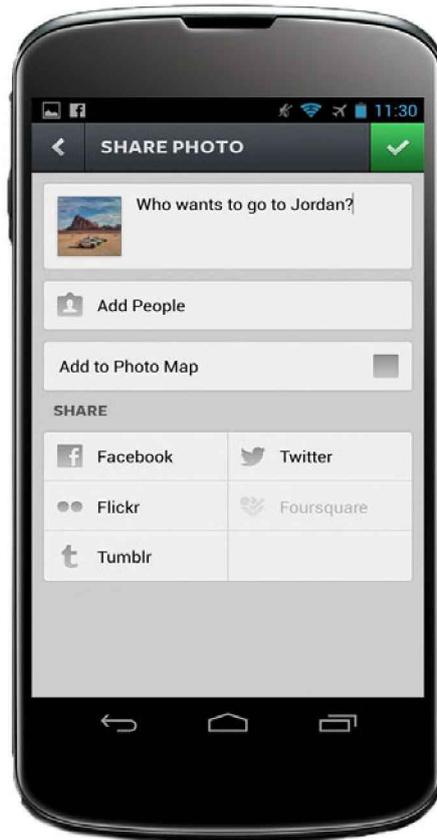
Step 4

Because Instagram requires all images to have a 1:1 square ratio, you now have to decide how you want to crop the image you selected. Once you are satisfied with the crop, press the blue double-arrows in the upper-right corner.



Step 5

Edit your image using Instagram's built-in features. At the bottom of the screen, you will find the image editing presets; scroll to the right, because there are 14 in all. At the top of the screen are the icons for, from left to right, Border, Blur, Lux, and Rotate. When you have completed your image edits, tap the blue double-arrows in the upper-right corner.



Step 6

On the Share Photo page, you have a number of options. Enter any text, including any hashtags you want to include with your Instagram post. Then add any people or company brand pages that might be included in your shot. If you are on location, you can add the GPS coordinates of your photo by pressing the black box in the Add to Photo Map field. Lastly, you can choose to upload your photo to any of the following networks while you upload it to Instagram: Facebook, Flickr, Tumblr, Twitter, and Foursquare. When you are ready to share your photo, press the green check mark in the upper-right corner.

Android Mobile Photography Accessories

These two accessories for your Android phone can elevate the quality of your images.

Joby GripTight

Although mobile phones are generally thought of as “on the move” devices, they come with a number of limitations, including photographing in low-light situations. Even when you use the Night mode found on many mobile phones, you might find that your images still come out blurry. This is because the shutter on your phone’s camera is open longer while it attempts to let more light into your exposure. Any movement of the phone can make these images unusable.



Figure 50

The Joby GripTight can attach to nearly any tripod.

When working with a DSLR and professional camera gear, a photographer's first instinct is to use a tripod. But with mobile phones, this wasn't possible, as there was no easy way to attach the phone to a tripod – until now. A California-based company named Joby, famous for their GorillaPod tripods, came up with an ingenious solution with their GripTight mount for smartphones (**Figure 50**). Using compression springs, the GripTight stretches its arms to fit just about any mobile phone. On the flipside, it uses a universal stainless-steel screw that fits almost every camera tripod out there. But what do you do if you don't own a tripod? Joby produces an assortment of flexible and portable tripods called GorillaPods (**Figure 51**), which you can attach to nearly anything. Fences, railings, trees – no problem (**Figure 52**). If you are looking for a tripod solution for your mobile camera needs, Joby probably has a solution for you.



Figure 51
The Joby GripTight attached to the GorillaPod Zoom tripod

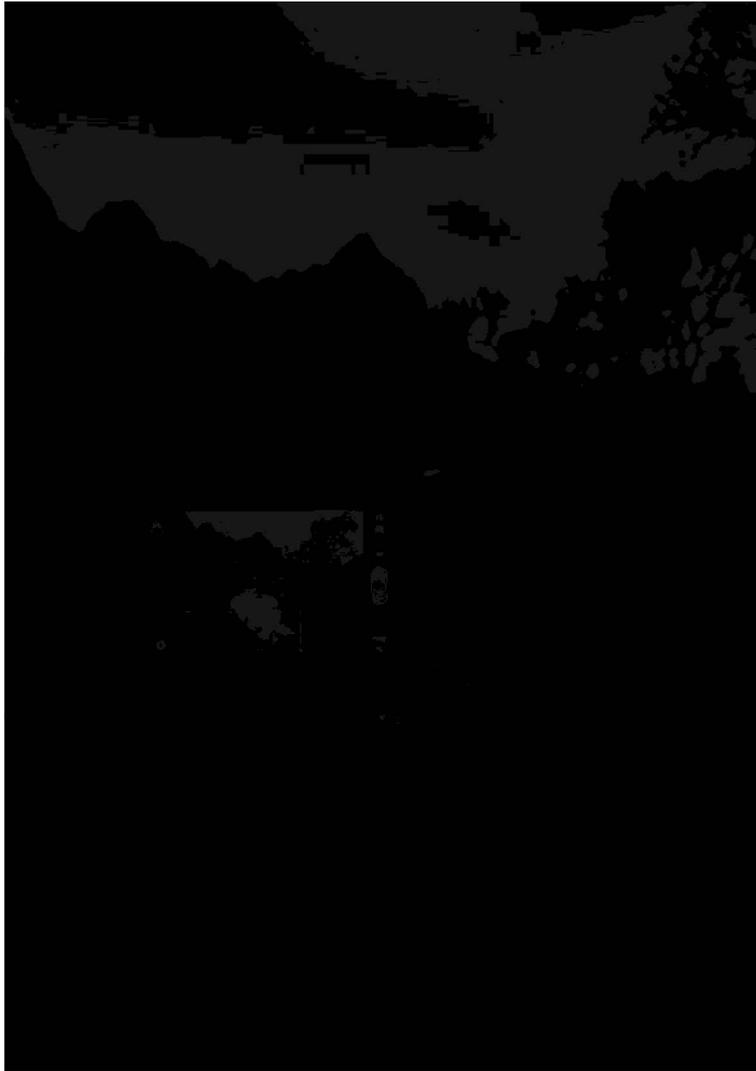


Figure 52

The GorillaPod Stand and the GripTight attached to a bridge railing

Photojojo Attachable Lenses

Another limitation of smartphone cameras is the fixed lenses they use. While you certainly have the ability to zoom in on a scene with your Android phone, your images will quickly become pixelated because it is using digital zooming, not optical zooming like you would find on DSLR's telephoto lens. In the opposite direction, you can't make your lens have a wider viewing angle either. This is where the company Photojojo comes in. They have created a series of attachable lenses (**Figure 53**) for your Android phone or tablet.



Figure 53

Photojojo's attachable lenses: fisheye, wide-angle, and telephoto

Using magnets, these lenses can be easily and quickly attached, removed, and swapped out with each other. They're fairly universally accepted, meaning that if you move phones (or come from an iPhone), these lenses should still work for you (Figure 54). This set allows you to expand your photographic creativity and move beyond some of the limitations of using a camera inside a mobile device.



Figure 54

The Photojojo lens kit works both on iPhones and on most Android mobile devices.