

# Design for Developers

Images

# Introduction

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Images can be decorative or part of the content on a page.

Make sure your images are relevant to what your design is trying to communicate. Images are meant to enhance and provide a visual aid. If your site is all about cats, you wouldn't use a picture of a hippopotamus, would you?

Wherever possible you probably want to use original images but if you can't get your hands on those, stock photography is the way to go. There are many places you can get free photos as well as licensed photos for a fee.

# Where to get images?

# Where to get images?

The easiest to use pictures are going to be ones you take yourself. You own the copyright and you can use them however you want. However, not all of us are amazing photographers so we need a source of high-quality images.

Googling for an image and using it without attribution or checking the license isn't okay and you can get fined for it.

There are four kinds of images you can find online: rights-protected, royalty-free, common free license, or public domain.

# Where to get images?

**Rights Protected** images can be purchased with a copyright license that specifies how an image can be used. Generally, you'll pay more for an image: if you intend to use it for commercial purposes, have an audience greater than 500,000 impressions and you've printed it or used it in some sort of television/movie/commercial production, want exclusive rights.

You can get rights protected images from sites like iStockphoto, Shutterstock, or Getty Images.

# Where to get images?

<https://www.istockphoto.com/>

<https://www.istockphoto.com/help/licenses>

## What license do I need?

When you download a file on iStock, you're buying a standard license that lets you use the file for any personal, business or commercial purposes that aren't otherwise restricted by the license (check out the full [content license agreement](#)).

That means you can use our content in advertising, marketing, apps, websites, social media, TV and film, presentations, newspapers, magazines and books, and product packaging, among hundreds of other uses.

Adding an extended license lets you use our content in even more ways.

# Where to get images?

<https://www.shutterstock.com/photos>

<https://www.shutterstock.com/license>

Dear Shutterstock Customer:

The following Terms of Service ("TOS") is a legal agreement between you or the employer or other entity on whose behalf you are entering into this agreement ("you" or "Customer") and Shutterstock (as such term is defined in Section 25 below) and sets forth the rights and obligations with respect to any Content licensed by you. By entering into this TOS, you verify that your country of residence is the same as your billing address.

Please revisit this TOS when you purchase any Content licenses. Shutterstock reserves the right to modify the TOS at any time in its sole discretion. Prior to such changes becoming effective, Shutterstock will use reasonable efforts to notify you of any such change. Such notice may be made by email to the email address on file in your Shutterstock account, an announcement on this

# Where to get images?

“**Royalty-free images** are a special category of images that come with a unique license. Individuals and businesses can license a royalty-free image once, then use that image in perpetuity without having to renew the license.” [Source](#)

<https://unsplash.com/>

<https://unsplash.com/license>

# Where to get images?

## License

Unsplash photos are made to be used freely. Our license reflects that.

- All photos can be **downloaded** and used for **free**
- Commercial** and **non-commercial** purposes
- No permission needed** (though attribution is appreciated!)

## What is not permitted 🚫

- Photos cannot be **sold** without significant modification.
- Compiling photos from Unsplash to replicate a similar or competing service.

# Where to get images?

Common free licensed Images are protected by copyright but are free to use, share, repurpose, and adapt. Most common free photographs use a creative commons license.

<https://creativecommons.org/> is a not-for-profit organization that helps people properly label their content for reuse by others.

# Where to get images?

There are different types of creative licenses creatives can use.

1. **Attribution** - This license allows reusers to distribute, remix, adapt, and build upon the material in any medium or format, so long as attribution is given to the creator. The license allows for commercial use.
2. **ShareAlike** - This license allows reusers to distribute, remix, adapt, and build upon the material in any medium or format, so long as attribution is given to the creator. The license allows for commercial use. If you remix, adapt, or build upon the material, you must license the modified material under identical terms.

# Where to get images?

3. **NoDerivs** - This license allows reusers to copy and distribute the material in any medium or format in unadapted form only, and only so long as attribution is given to the creator. The license allows for commercial use.
4. **NonCommercial** - This license allows reusers to distribute, remix, adapt, and build upon the material in any medium or format for noncommercial purposes only, and only so long as attribution is given to the creator.
5. **NonCommercial-NoDerivs** - This license allows reusers to copy and distribute the material in any medium or format in unadapted form only, for noncommercial purposes only, and only so long as attribution is given to the creator.

# Where to get images?

6. **NonCommercial-ShareALike** - This license allows reusers to distribute, remix, adapt, and build upon the material in any medium or format for noncommercial purposes only, and only so long as attribution is given to the creator. If you remix, adapt, or build upon the material, you must license the modified material under identical terms.

You can search on their website for different licensed images:

<https://search.creativecommons.org/>

# Where to get images?

Pixabay uses Creative Commons images.

<https://pixabay.com>

<https://pixabay.com/service/license/>

## What is allowed?

- ✓ All content on Pixabay can be used for free for commercial and noncommercial use across print and digital, except in the cases mentioned in "What is not allowed".
- ✓ Attribution is not required. Giving credit to the contributor or Pixabay is not necessary but is always appreciated by our community.
- ✓ You can make modifications to content from Pixabay.

# Where to get images?

## **What is not allowed?**

This section only applies to image users and not to the appropriate image authors.

- ✗ Don't redistribute or sell someone else's Pixabay images or videos on other stock or wallpaper platforms.
- ✗ Don't sell unaltered copies of an image. e.g. sell an exact copy of a stock photo as a poster, print or on a physical product.
- ✗ Don't portray identifiable people in a bad light or in a way that is offensive.
- ✗ Don't use images with identifiable brands to create a misleading association with a product or service.

# Where to get images?

Photographs that are over 100 years old or produced by the government or government agency are considered to be in the **public domain**. Public domain photos are not protected by copyright and have no licensing fee for any type of use.

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Make sure you know what kind of license an image uses before you start using it. Sometimes you'll be required to pay a small fee, give attribution, limit how you use an image, etc. It's important to respect any restrictions on an image unless you want to run the risk of being fined or having legal action taken against you.

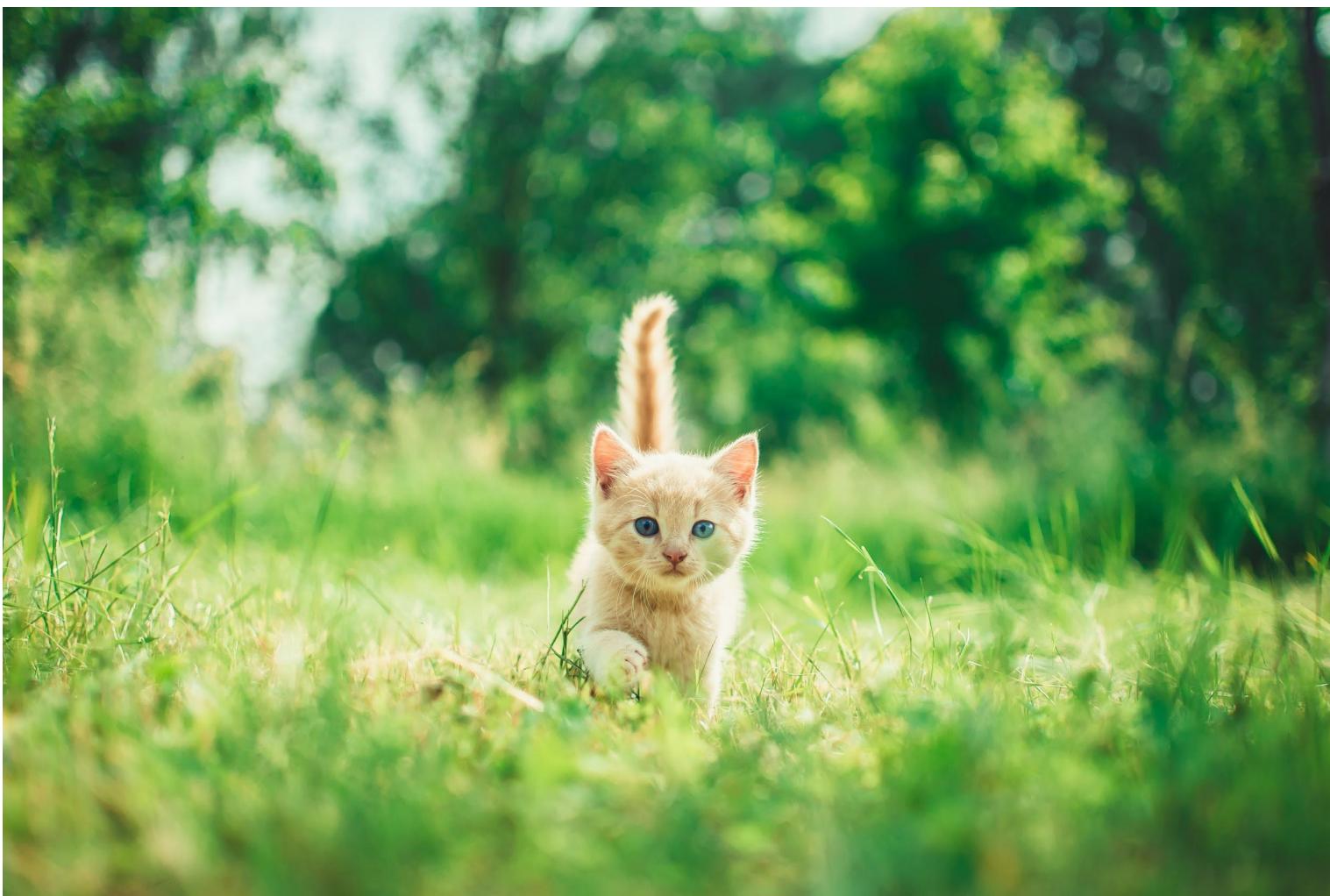


Photo by [Andriyko Podilnyk](#) on [Unsplash](#)



"Little foster kitten" by AlanH2O is licensed under CC BY-SA 2.0

Photo by [Diego Rosa](#) on [Unsplash](#)



# In-Class Exercise

Go to Pixabay.com, Unsplash.com, or <https://search.creativecommons.org/> and find a picture of an animal. Make sure you read the license to so you know if you can edit the image and use it on your website.

# Image Editing Software

# Image Editing Software

Now that you have an image, you'll likely want to resize it, scale it, add text, etc. The good news is, you don't have to spend a tonne of money doing this! There are some great free resources you can use.

If you do have access to a license or a subscription, Photoshop is the standard in the industry but let's explore the free options.

# Image Editing Software

<https://www.gimp.org/>

<https://www.gimp.org/tutorials/>

Gimp is a piece of software you can download and run on your computer. It is free and very robust in what it can do. There is a bit of a learning curve so you might want to check out a few tutorials.

# Image Editing Software

<https://www.photopea.com/>

<https://www.photopea.com/tuts/>

Photopea runs in your browser and has quite a bit of functionality available. It's very convenient to use when you're in a hurry. Make sure you save a PSD of your work so you can import it later and have all of your layers intact.

There are many more free image editing tools out there like pixlr.com and even canva.com (to an extent).

# In-class Exercise

1. Go to <https://www.photopea.com/> and click 'New Project'
2. Select Social → Instagram and click the Create button
3. Go to File → Open & Place and select the photograph you sourced in our last exercise
4. Hold the shift key and drag the corners of the image to increase the size to cover the whole area of the square image (holding shift ensures the image scales as you increase the size)
5. File → Save as PSD so we can use this image in our next exercise

# Image Composition

# Image Composition

Usually the photographs you get will already have good composition but sometimes you'll need to make edits to get a composition that is dynamic and eye-catching.

You don't have to be an expert photographer to create a good composition, we'll go over some rules that will help you out!

# Image Composition

1. Cropping
2. Don't cut off limbs
3. The Rule of Thirds
4. Use frames
5. Make the most of leading lines
6. Simplify - know your focus
7. Watch your background
8. Look for symmetry/patterns
9. Create depth

[Source](#)

# Image Composition

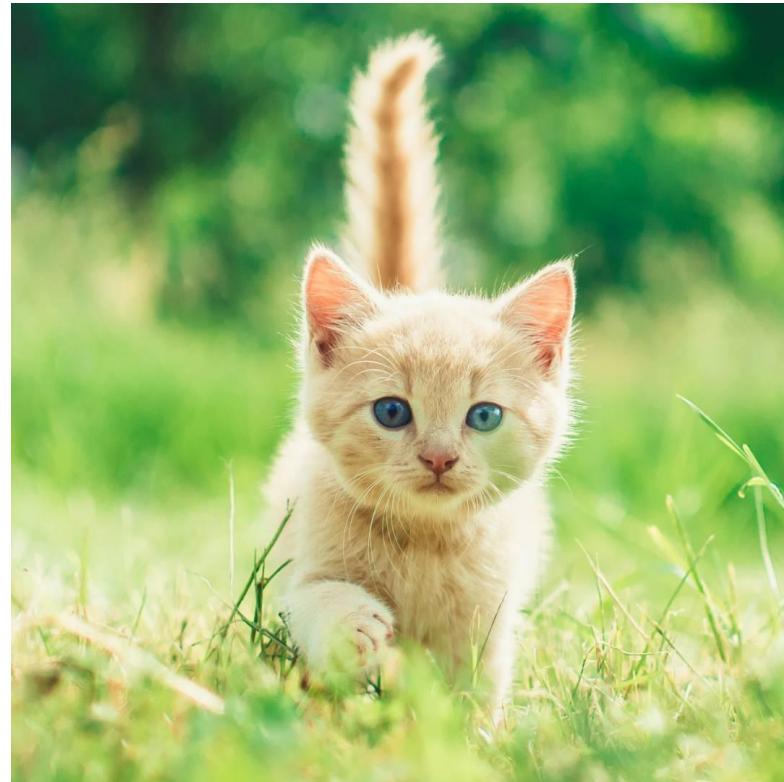
## Cropping

Cropping, or filling the frame, is one way to make sure viewer attention is focussed on the subject of the photo.

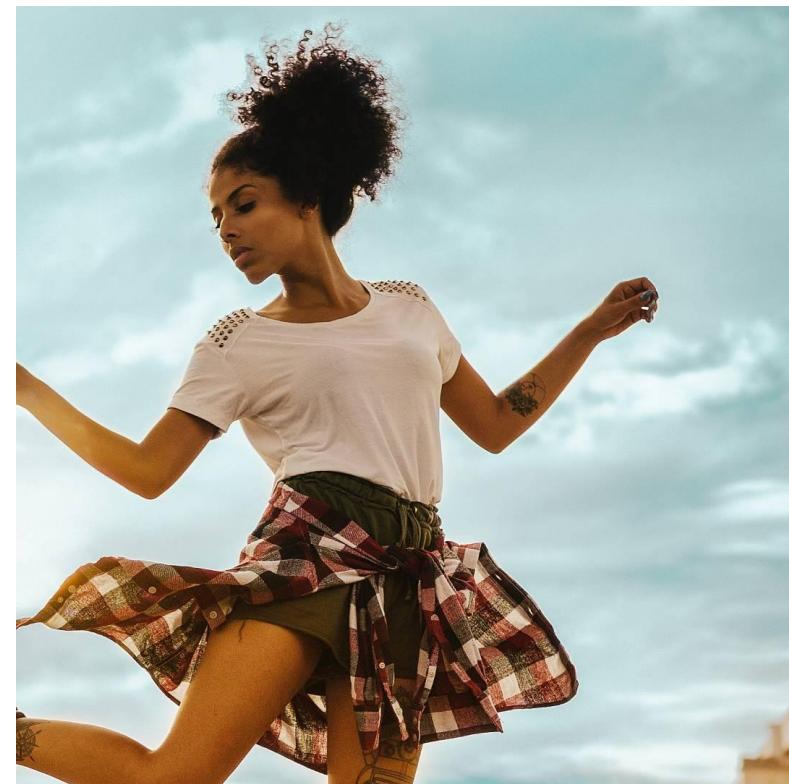
Fill the frame with the subject, getting a nice, tight closeup.



# Image Composition



# Image Composition



## Don't Cut Off The Limbs

Cutting off limbs draws the eye to where the cutoff happens. You generally want to avoid this as it draws focus away from the subject of your photo.

This photo would look much nicer if dancer's arm and leg weren't cut off.

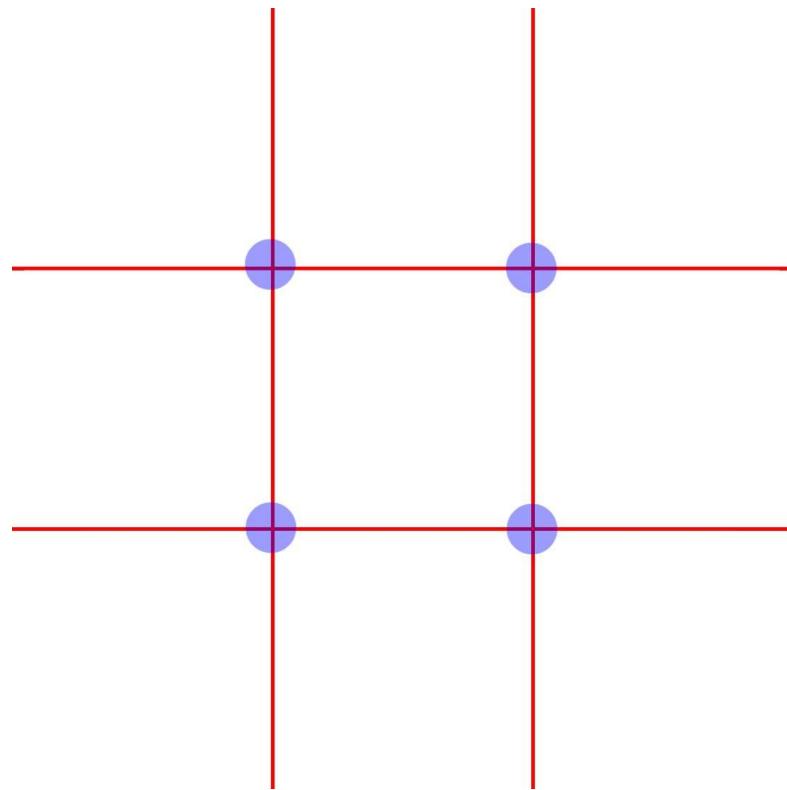
# Image Composition



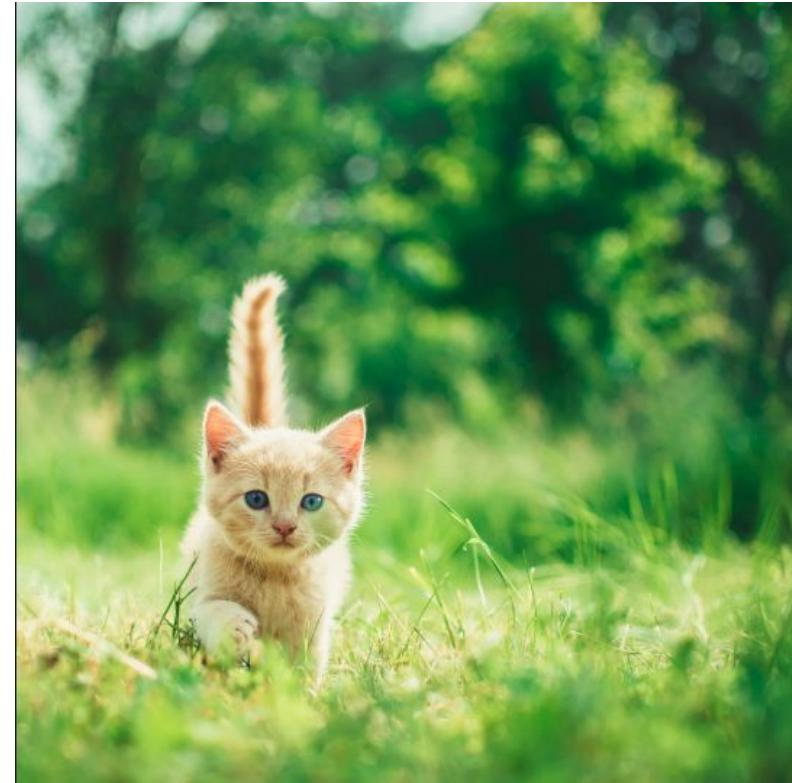
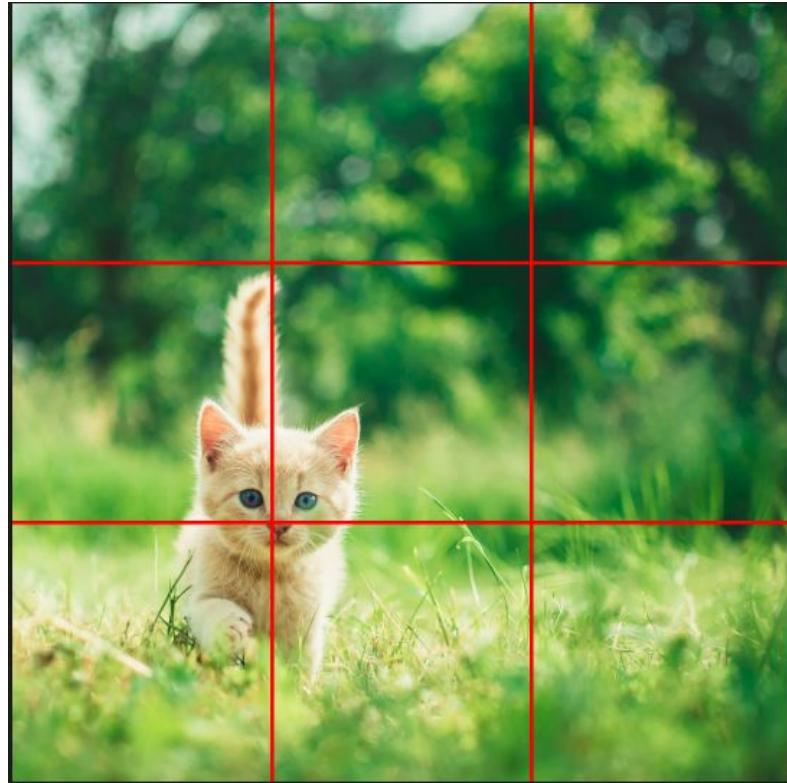
# Image Composition

## The Rule of Thirds

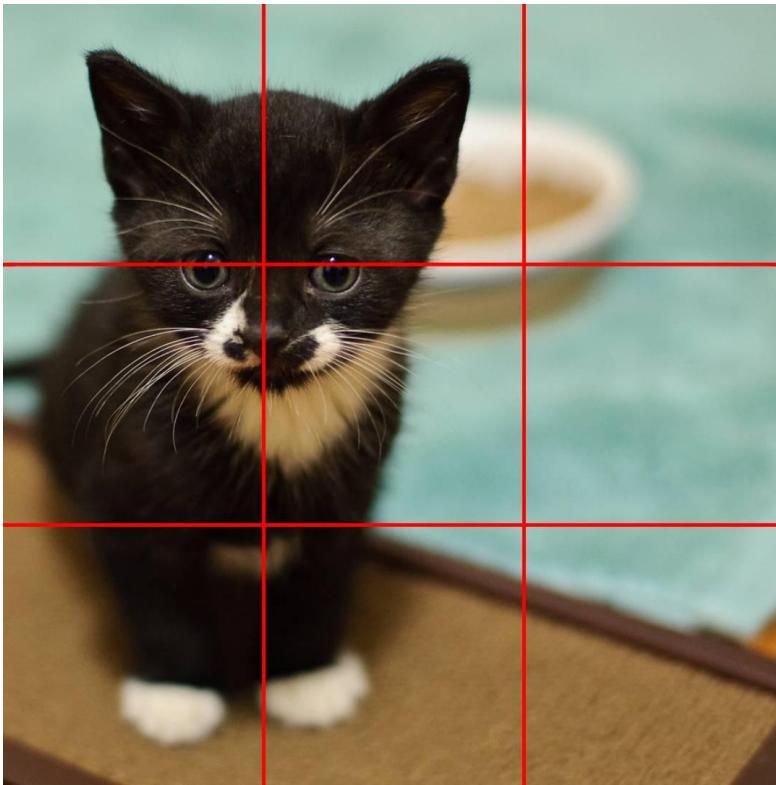
A photo is divided into a 3x3 grid and the subject of the image is placed at the intersections of the dividing lines or along one of the lines itself.



# Image Composition



# Image Composition



# Image Composition



## Use Frames

Frames can isolate your subject, draw the eye directly towards the subject, can hide unwanted items, give an image depth and help create context.

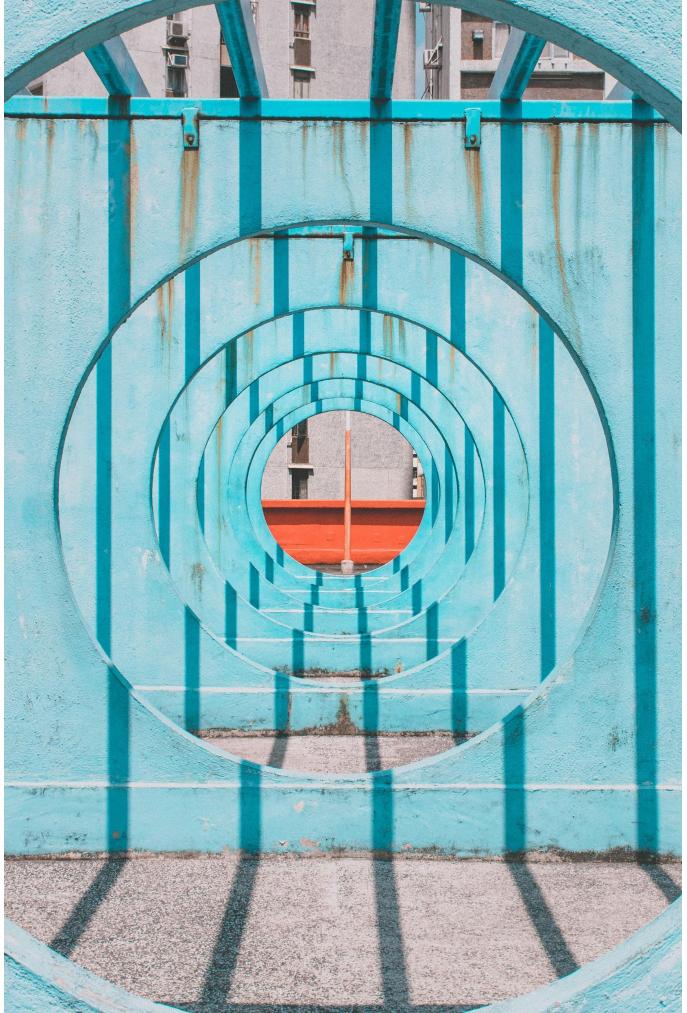


Photo by [Joel Fulgencio](#) on [Unsplash](#)



Photo by [Filip Zrnzević](#) on [Unsplash](#)

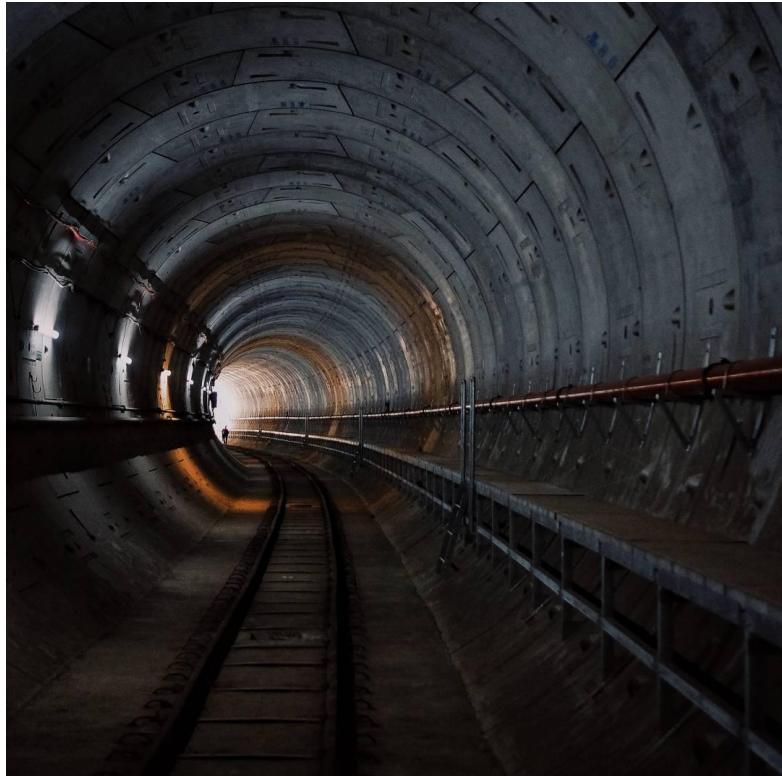
# Image Composition

## Make the most of leading lines

Your gaze is unconsciously drawn along lines in images.

Focal points can be placed along lines or you can lead a viewer to one main area of focus.

Photo by [Claudia Soraya](#) on [Unsplash](#)



# Image Composition

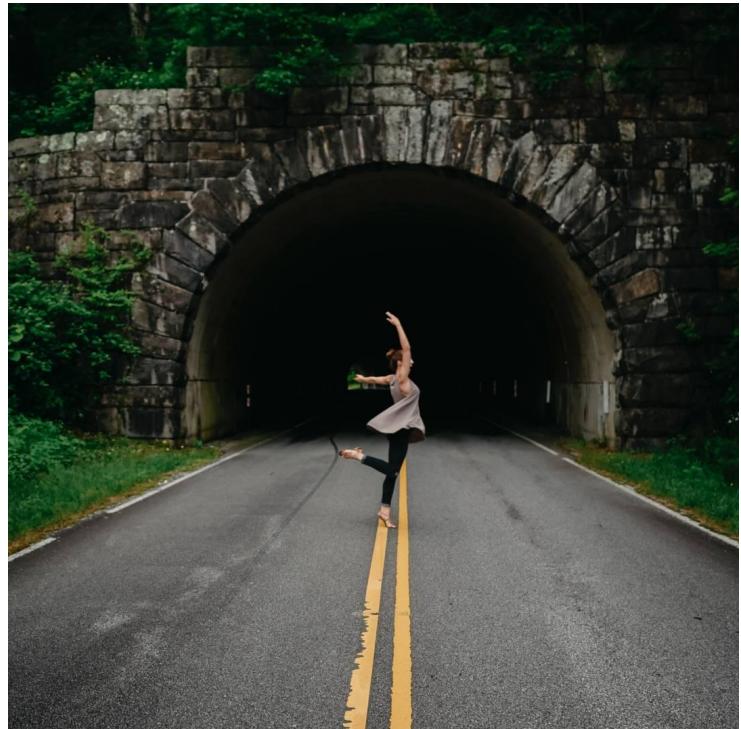


Photo by [David Charles Schuett](#) on [Unsplash](#)

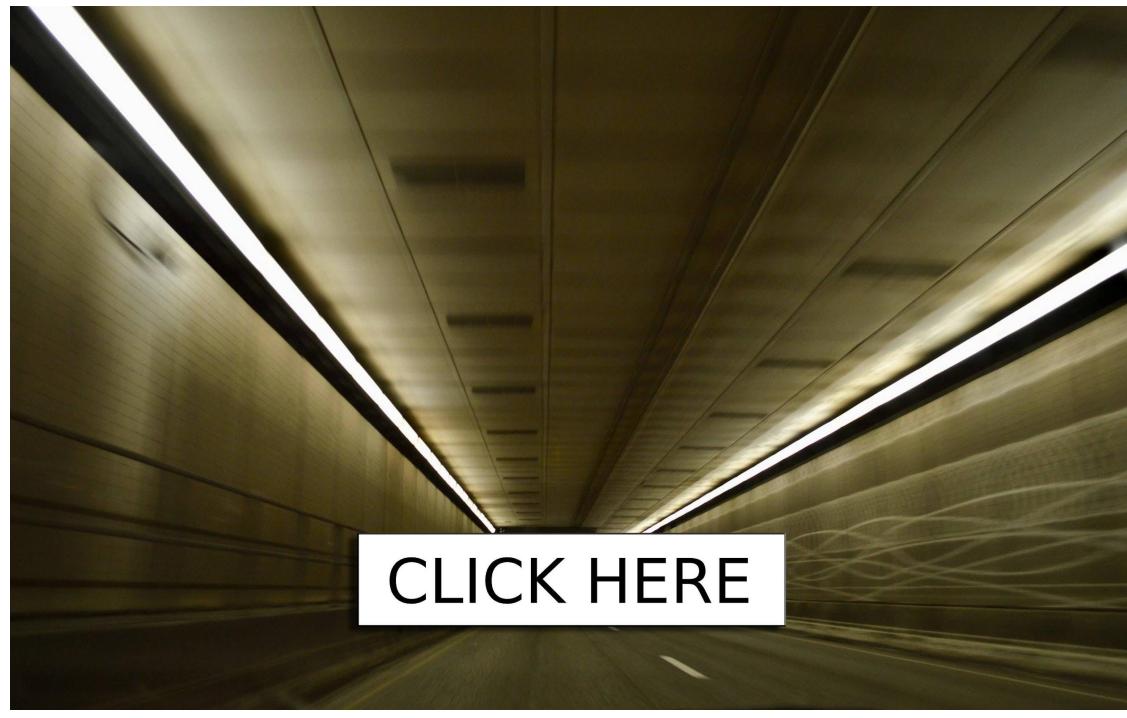


Photo by [Moriah Bender](#) on [Unsplash](#)

# Image Composition



## Simplify - know your focus

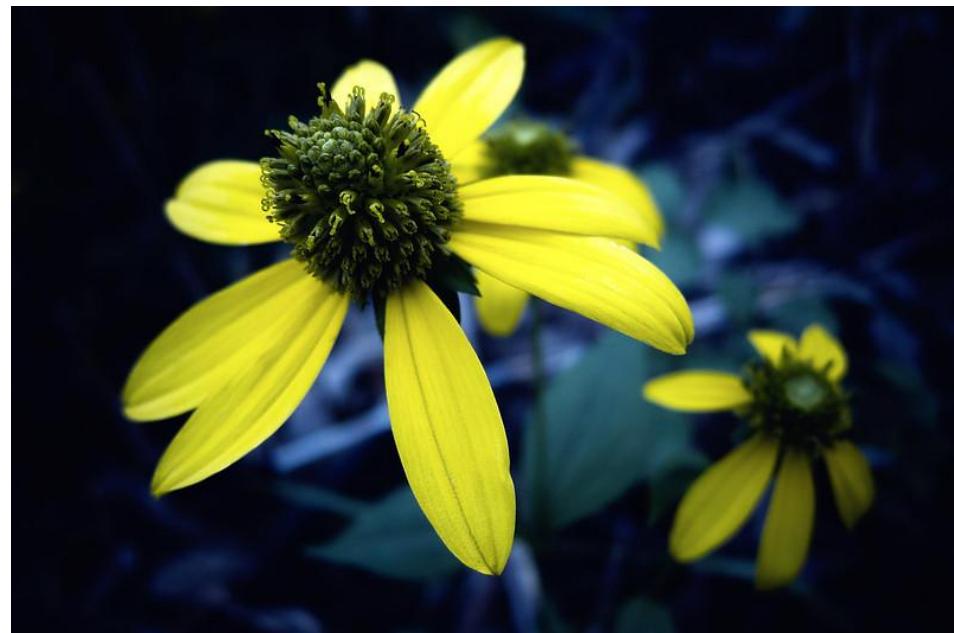
Trying to fit too much into an image means a viewer keeps trying to find a point of focus. If they can't find a point of focus they'll get bored and leave.

The flowers on the left don't have a point of focus.

# Image Composition



"yellow flowers" by dottieg2007 is licensed under CC BY 2.0



"Yellow Flower" by onigiri-kun is licensed under CC BY-ND 2.0

# Image Composition

## Watch your background

A busy background will draw the eye away from the subject of your photo.

Try to pick photos where the background doesn't compete with the subject for attention.





# Image Composition

## Look for symmetry/patterns

Symmetry can be used to guide the eye to a central point. Just remember you do need a focus point or the effect won't work as well.

Symmetry can also involve non-related objects that resemble each other in shape, colour or texture.

# Image Composition

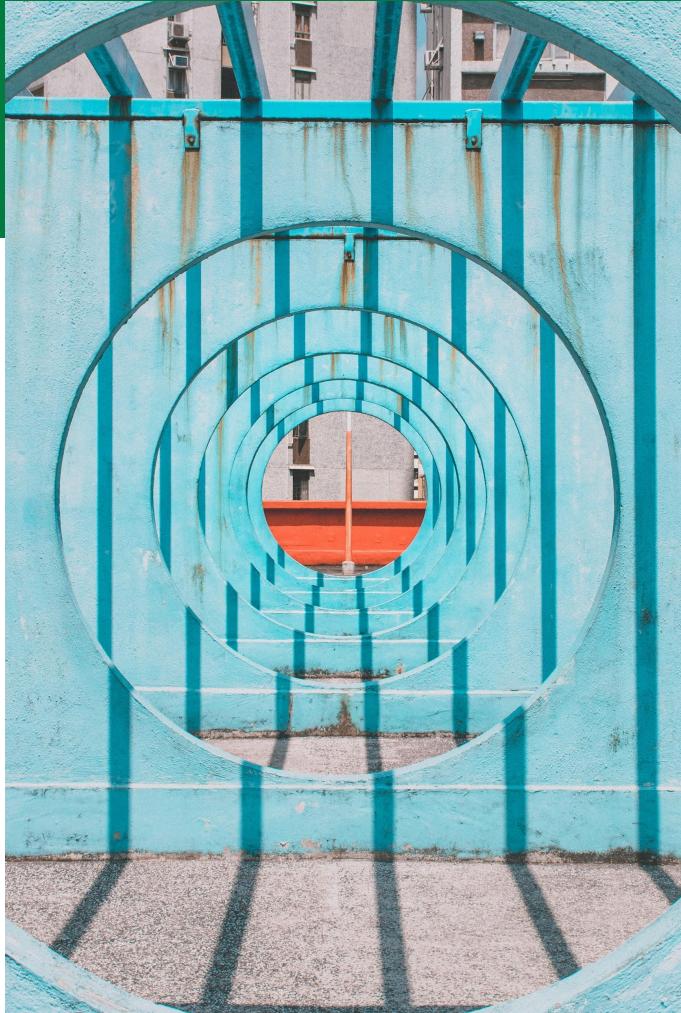


Photo by [Thanos Pal](#) on [Unsplash](#)

# Image Composition

## Create depth

Use a foreground, middleground, and background to add depth to an image and pull the eye through the picture.



# Image Composition



Photo by [Luca Bravo](#) on [Unsplash](#)

# Image Formats

# Image Formats

Image formats matter because they can affect performance, appearance, and scalability and how they look on both large and small screens. Get it wrong and you can have fast-loading terrible looking photos or really gorgeous looking slow-loading images.

You may already be familiar with the main three types of image formats (JPEG, PNG, GIF) but did you know what each format is best used for?

Have you been keeping up with what the newest image formats are and what they're best used for?

# Image Formats

The traditional main three:

- **JPEG** - Joint Photographic Expert Group image
- **GIF** - Graphics Interchange Format
- **PNG** - Portable Network Graphics

New formats:

- **APNG** - Animated Portable Network Graphics
- **AVIF** - AV1 Image File Format
- **SVG** - Scalable Vector Graphics
- **WEBP** - Web Picture format

# Image Formats

## JPEG - .jpg, .jpeg, .jfif, .pjeg .pjp

JPEG files have lossy compression which helps make them smaller than lossless types like PNG files. They're best suited for digital photographs without text. Text can show artifacts if you are not careful and is more suited to a PNG file.

If you need a super sharp image, go with a PNG.

*Supported: Chrome, Edge, Firefox, IE, Opera Safari*



# Image Formats

## GIF - .gif

GIFs are used for very simple images and animations however it is not very performant. For still images, consider going with a PNG file, instead. For animated images consider going for WebP, AVIF ,or APNG images, instead. If you're making a meme... a gif is acceptable.

*Supported: Chrome, Edge, Firefox, IE, Opera, Safari*



[Gif from Giphy](#)

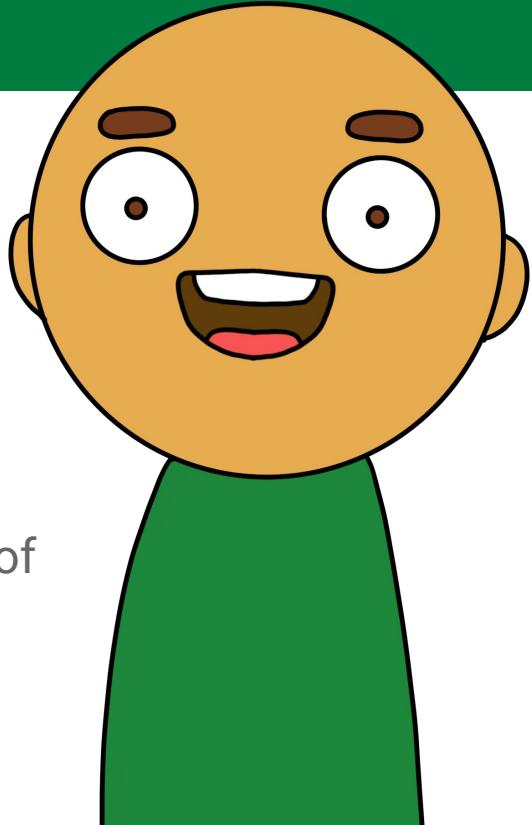
# Image Formats

## PNG - .png

PNG files are preferred when you need to create a precise reproduction of a source image or there is transparency in your image that you want to preserve. Used a lot for logos, screenshots, and still images where you need to preserve detail. Use WebP/AVIF if you want the better reproduction of a PNG but you want higher compression (smaller file size).

<https://tinyjpg.com/>

*Supported: Chrome, Edge, Firefox, IE, Opera, Safari*



# Image Formats

## APNG - .apng

Used for animated images and it is more performant than a GIF. AVIF and WebP have better performance than APNG but they do not have the same broad browser support.

*Supported: Chrome, Edge, Firefox, Opera, Safari*

# Image Formats

## AVIF - .avif

Not very widely supported but it is a good choice for both animated and still images. Better compression than PNG or JPEG and has support for higher colour depths, animated frames, and transparency. However, if you are going to use AVIF format you need to provide fallbacks to formats with better browser support.

*Supported: Chrome, Firefox, Opera*

# Image Formats

## **SVG** - .svg

Good for UI (User Interface) elements, icons, logos, diagrams, etc. Because it is a vector image format and not a raster image format it is not a good choice for photographs.

*Supported: Chrome, Edge, Firefox, IE, Opera, Safari*

# Image Formats

## WEBP - .webp

Use for both still and animated images. Offers much better compression than a PNG or JPG. Supports animation, transparency, etc.

<https://tiny-img.com/webp/> to change a PNG or JPG to a WebP image.

*Supported: Chrome, Edge, Firefox, Opera, Safari*

# Image Formats

"The older formats like PNG, JPEG, GIF have poor performance compared to newer formats like WebP and AVIF, but enjoy broader "historical" browser support. The newer image formats are seeing increasing popularity as browsers without support become increasingly irrelevant (i.e. have virtually zero market share)."

[Source](#)

What formats you'll ultimately end up using will depend on what browsers you are supporting but it recommended to use the newer formats wherever possible.

# Image Optimization

# Image Optimization

What do we mean when we say we want to optimize an image? It's very simple, we are trying to reduce the file size of an image while still maintaining image quality.

**The smaller the file size is the faster it will load.**

In the old days, we'd optimize images by saving them with a low DPI (Dots Per Inch)/quality from Photoshop but these days there are all sorts of useful tools you can use! There are web apps, desktop apps, plugins, libraries, services, etc  
Everybody seems to be on-board with image optimization!

# Image Optimization

Of course, optimization starts with picking the right image format for the job and resizing your images so you're not loading a 4000px wide image into a 400px space.

Use the <picture> tag and srcset to load the correctly sized image for the job. If you can't do that, then make sure you at least resize your image to the correct dimensions for what you're using it for. Oversized images on webpages are a big problem for page speed performance.

# Image Optimization

There are a tonne of apps and services out there that will optimize your images for you.

<https://tinyjpg.com/> - PNG or JPG optimization

<https://jakearchibald.github.io/svgomg/> - To optimize SVG files

<https://tiny-img.com/webp/> - Converts PNG and JPEG files to WebP and optimizes them. Also optimizes WebP images.

# Image Optimization

<https://imageoptim.com/> & <https://tinybeest.com/> - For Macs only.

<https://kraken.io/> - One of the heavier hitters online. They have plugins for WordPress and Magento as well as an API.

<https://cloudinary.com/> - A CDN that will convert images to WebP on the fly, automatically adjust quality, etc. Has APIs, plugins, NPM packages etc.

# Image Optimization

Steps to optimize your image:

1. Know what image format is best for your image/use
2. Resize the image dimensions using an image editor to fit your use
3. Run the image through an optimization software/service
4. Use best web practices to serve up images in your code

# Assignment

# Notes