

# 5 MORE

## Image Optimization Techniques

**.JPG**



**.WEBP**



**.AVIF**



# 1. AVIF Format

Offers even better compression than WebP, resulting in smaller file sizes. It is also widely supported on all major browsers.

You can also use the `picture` tag to provide fallback images.

```
<picture>  
  <source type="image/avif" srcset="image.avif" />  
  <source type="image/webp" srcset="image.webp" />  
    
</picture>
```

# 2. Image Sprites

Combine multiple small images into a single file, reducing the number of HTTP requests your site needs to make.

Single image with every icon or emoji you might need:



Then use css to display the emoji you want:

```
.sprite {
  background: url('sprite.png') no-repeat;
  display: inline-block;
}
.icon1 {
  background-position: 0 0;
  width: 50px;
  height: 50px;
}
.icon2 {
  background-position: -50px 0;
  width: 50px;
  height: 50px;
}
```

# 3. Use a CDN

CDNs store your images in multiple locations worldwide, delivering them from the nearest server to the user reducing latency by caching images closer to your users.

CDN Services you might want to use:



# 4. Image Dimensions

**Resize your images to the exact dimensions needed for display before uploading them to your website. Prevent unnecessary downloading of oversized images!**



**Websites often serve oversized images (3000x3000px) for small displays (250x250px), causing unnecessary slowdowns during resizing.**



**Instead, use tools like Photoshop, Gimp, TinyPNG or Squoosh to resize your images to the size they will be displayed on.**

# 5. Image Subsetting

**Deliver only the portion of an image that's visible or relevant, rather than the entire image. This reduces file size and bandwidth needed to load the image, resulting in faster load times**

**Services like Cloudinary or imgix to deliver only the portion of an image needed, based on the user's screen size or viewport like so:**

```

```

**In this example, only a 300x200 portion of the original image starting at (50, 50) is delivered to the user, reducing the image size and improving load times.**