



Image Analysis

CyberSmarts



Common Image [File]types

JPEG

Joint Photographic Experts Group

GIF

Graphics Interchange Format

TIFF

Tagged Image File

BMP

Bitmap File Format

PNG

Portable Network Graphics

PDF

Portable Document Format

JPEG

Created by the organization/committee which it's named after: Joint Photogenic Experts Group, in 1992. It's a compressed version of the original file, which is known as 'lossy', which means that it has lower quality for greater portability and less demand on the recipient's bandwidth.

JPEGs are known to provide a lot of metadata, such as pixel data, aspect-ratio, etc.

```
> exiftool turkey_for_beginners.jpg
ExifTool Version Number      : 12.30
File Name                    : turkey_for_beginners.jpg
Directory                   : .
File Size                    : 119 KiB
File Modification Date/Time  : 2021:06:09 20:14:58-04:00
File Access Date/Time       : 2021:09:13 17:15:39-04:00
File Inode Change Date/Time  : 2021:06:09 20:14:58-04:00
File Permissions             : -rw-r--r--
File Type                    : JPEG
File Type Extension         : jpg
MIME Type                    : image/jpeg
JFIF Version                 : 1.01
Resolution Unit              : None
X Resolution                  : 1
Y Resolution                  : 1
Image Width                  : 900
Image Height                  : 602
Encoding Process              : Progressive DCT, Huffman codin
Bits Per Sample              : 8
Color Components              : 3
Y Cb Cr Sub Sampling         : YCbCr4:2:0 (2 2)
Image Size                   : 900x602
Megapixels                   : 0.542
```

PNG

Portable Document File

Creates a lossless version of a graphics, and even word processor files.

GIF

Graphics Interchange Format

An image format which has multiple uses but is primarily used for animated photos and icons (such as favicons of a website.)

TIFF

Tagged Image File Format

Commonly used in publishing and graphic design.

The default file format for macOS's screen capture utility.

Not used as much now except with scanning and fax applications, such as Microsoft Document Imaging.

Metadata Tools

- Exiftool
 - Exiv2
 - Hachoir
-
- Google Maps

