

```
In [1]: import numpy as np
```

```
In [3]: ones_arr= np.ones((3,3))
```

```
In [4]: ones_arr
```

```
Out[4]: array([[1., 1., 1.],  
               [1., 1., 1.],  
               [1., 1., 1.]])
```

```
In [5]: ones_arr= np.ones((5,5), dtype=int)
```

```
In [6]: ones_arr
```

```
Out[6]: array([[1, 1, 1, 1, 1],  
               [1, 1, 1, 1, 1],  
               [1, 1, 1, 1, 1],  
               [1, 1, 1, 1, 1],  
               [1, 1, 1, 1, 1]])
```

```
In [7]: ones_arr * 255
```

```
Out[7]: array([[255, 255, 255, 255, 255],  
               [255, 255, 255, 255, 255],  
               [255, 255, 255, 255, 255],  
               [255, 255, 255, 255, 255],  
               [255, 255, 255, 255, 255]])
```

```
In [8]: ones_arr
```

```
Out[8]: array([[1, 1, 1, 1, 1],  
               [1, 1, 1, 1, 1],  
               [1, 1, 1, 1, 1],  
               [1, 1, 1, 1, 1],  
               [1, 1, 1, 1, 1]])
```

```
In [ ]:
```

```
In [9]: import matplotlib.pyplot as plt
```

```
In [23]: %matplotlib inline
```

```
In [24]: from PIL import Image
```

```
In [37]: my_img= Image.open(r"P:\WhatsApp Image 2024-10-09 at 2.23.12 PM.jpeg")
```

```
In [38]: my_img
```

Out[38]:



In [ ]:

In [39]: `type(my_img)`Out[39]: `PIL.JpegImagePlugin.JpegImageFile`In [40]: `my_arr = np.asarray(my_img)`In [41]: `my_arr`

```
Out[41]: array([[[ 9, 23, 32],
   [ 9, 23, 32],
   [ 9, 23, 32],
   ...,
   [29, 57, 71],
   [29, 57, 71],
   [29, 57, 71]],

   [[11, 25, 34],
   [11, 25, 34],
   [11, 25, 34],
   ...,
   [24, 52, 66],
   [24, 52, 66],
   [24, 52, 66]],

   [[12, 26, 35],
   [12, 26, 35],
   [12, 26, 35],
   ...,
   [23, 51, 65],
   [23, 51, 65],
   [23, 51, 65]],

   ...,

   [[29, 37, 50],
   [30, 38, 51],
   [30, 38, 51],
   ...,
   [22, 28, 40],
   [23, 29, 41],
   [23, 29, 41]],

   [[28, 36, 49],
   [29, 37, 50],
   [30, 38, 51],
   ...,
   [20, 26, 38],
   [20, 26, 38],
   [19, 25, 37]],

   [[23, 31, 44],
   [26, 34, 47],
   [28, 36, 49],
   ...,
   [19, 25, 37],
   [18, 24, 36],
   [17, 23, 35]]], dtype=uint8)
```

```
In [42]: type(my_arr)
```

```
Out[42]: numpy.ndarray
```

```
In [43]: plt.imshow(my_img)
```

```
Out[43]: <matplotlib.image.AxesImage at 0x29e087fa090>
```



```
In [45]: my_img.resize
```

```
Out[45]: <bound method Image.resize of <PIL.JpegImagePlugin.JpegImageFile image mode=RGB  
size=643x360 at 0x29E0871B560>>
```

```
In [46]: my_img
```

```
Out[46]:
```



```
In [47]: my_img1=my_arr.copy()
```

```
In [49]: my_img1
```

```
Out[49]: array([[[ 9, 23, 32],
   [ 9, 23, 32],
   [ 9, 23, 32],
   ...,
   [29, 57, 71],
   [29, 57, 71],
   [29, 57, 71]],

  [[11, 25, 34],
   [11, 25, 34],
   [11, 25, 34],
   ...,
   [24, 52, 66],
   [24, 52, 66],
   [24, 52, 66]],

  [[12, 26, 35],
   [12, 26, 35],
   [12, 26, 35],
   ...,
   [23, 51, 65],
   [23, 51, 65],
   [23, 51, 65]],

  ...,

  [[29, 37, 50],
   [30, 38, 51],
   [30, 38, 51],
   ...,
   [22, 28, 40],
   [23, 29, 41],
   [23, 29, 41]],

  [[28, 36, 49],
   [29, 37, 50],
   [30, 38, 51],
   ...,
   [20, 26, 38],
   [20, 26, 38],
   [19, 25, 37]],

  [[23, 31, 44],
   [26, 34, 47],
   [28, 36, 49],
   ...,
   [19, 25, 37],
   [18, 24, 36],
   [17, 23, 35]]], dtype=uint8)
```

```
In [50]: my_arr == my_img1
```

```
Out[50]: array([[[ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True],
   ...,
   [ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True]],

[[ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True],
   ...,
   [ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True]],

[[ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True],
   ...,
   [ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True]],

...,

[[ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True],
   ...,
   [ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True]],

[[ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True],
   ...,
   [ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True]],

[[ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True],
   ...,
   [ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True]],

[[ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True],
   ...,
   [ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True]],

[[ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True],
   ...,
   [ True,  True,  True],
   [ True,  True,  True],
   [ True,  True,  True]]])
```

```
In [51]: plt.imshow(my_img1)
```

```
Out[51]: <matplotlib.image.AxesImage at 0x29e08ba1400>
```

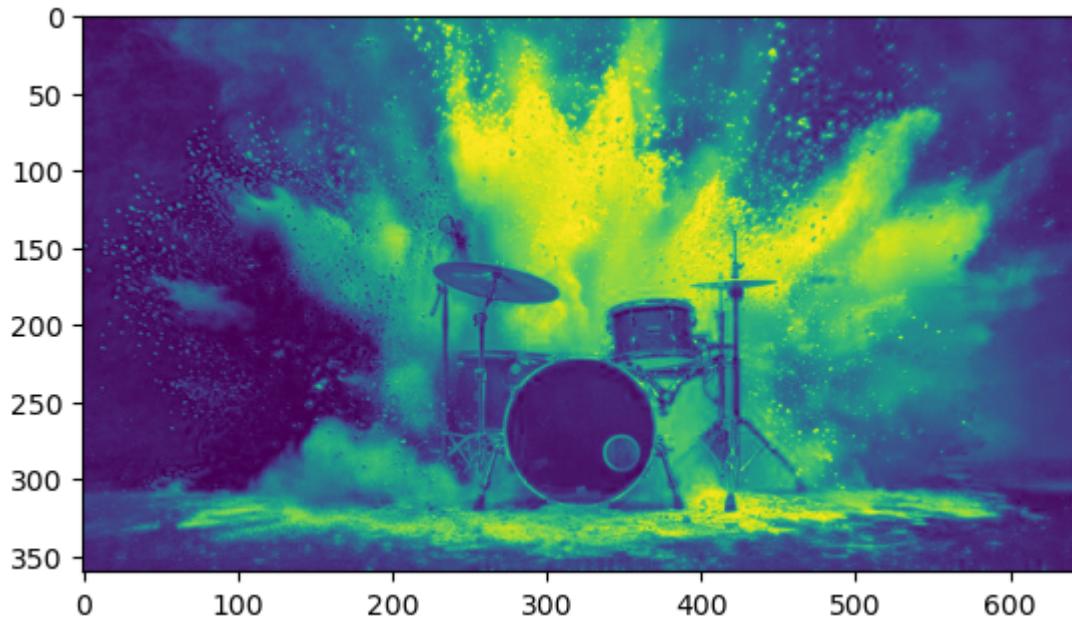


```
In [52]: my_img1.shape
```

```
Out[52]: (360, 643, 3)
```

```
In [61]: plt.imshow(my_img1[:, :, 0])
```

```
Out[61]: <matplotlib.image.AxesImage at 0x29e1a6a85c0>
```

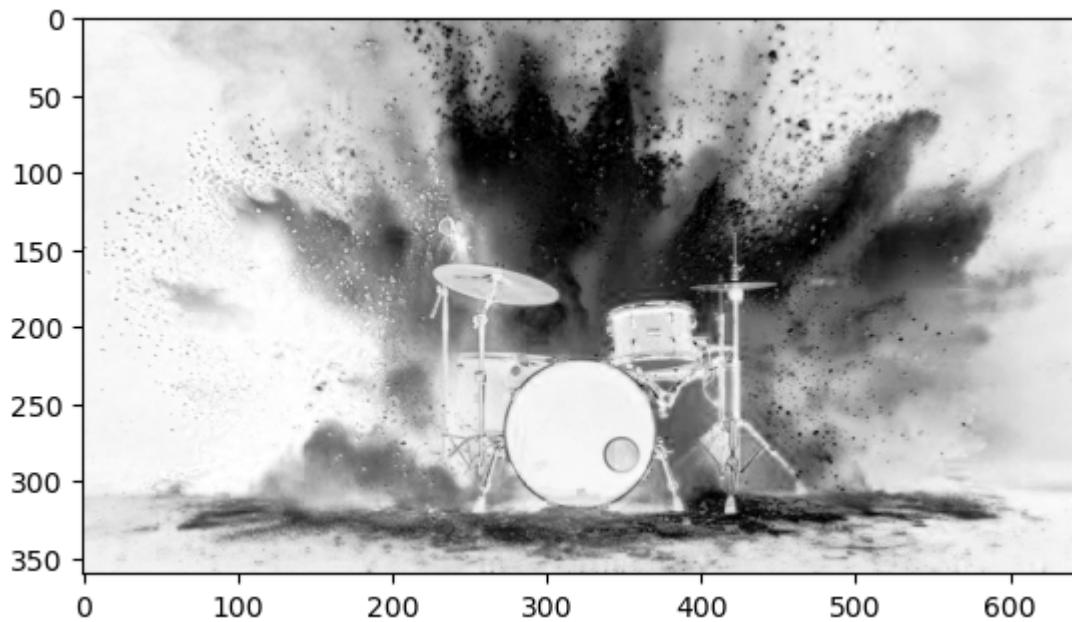


```
In [62]: my_img1[:, :, 0]
```

```
Out[62]: array([[ 9,  9,  9, ..., 29, 29, 29],
   [11, 11, 11, ..., 24, 24, 24],
   [12, 12, 12, ..., 23, 23, 23],
   ...,
   [29, 30, 30, ..., 22, 23, 23],
   [28, 29, 30, ..., 20, 20, 19],
   [23, 26, 28, ..., 19, 18, 17]], dtype=uint8)
```

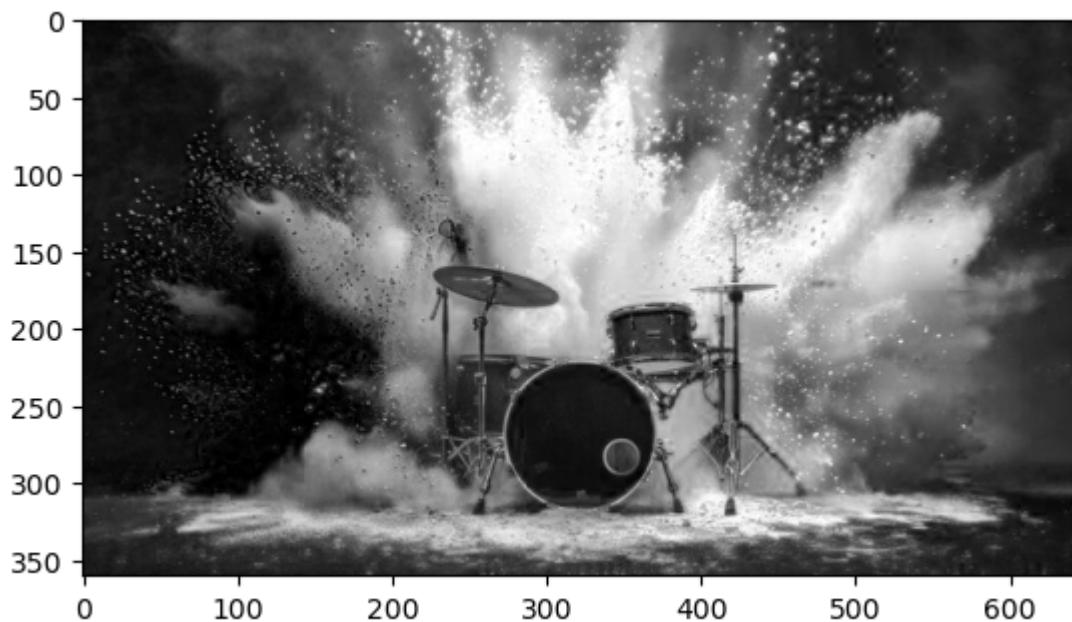
```
In [64]: plt.imshow(my_img1[:, :, 0], cmap='Greys')
```

```
Out[64]: <matplotlib.image.AxesImage at 0x29e1a6aaed0>
```



```
In [65]: plt.imshow(my_img1[:, :, 0], cmap='grey')
```

```
Out[65]: <matplotlib.image.AxesImage at 0x29e1a31a090>
```



```
In [68]: plt.imshow(my_img1[:, :, 0], cmap='YIGn')
```

```

-----
ValueError                                     Traceback (most recent call last)

Cell In[68], line 1
----> 1 plt.imshow(my_img1[:, :, 0], cmap='YIGn')

File ~\anaconda3\Lib\site-packages\matplotlib\pyplot.py:3358, in imshow(X, cmap,
norm, aspect, interpolation, alpha, vmin, vmax, origin, extent, interpolation_st
age, filternorm, filterrad, resample, url, data, **kwargs)
    3337 @_copy_docstring_and_deprecators(Axes.imshow)
    3338 def imshow(
    3339     X: ArrayLike | PIL.Image.Image,
    (...),
    3356     **kwargs,
    3357 ) -> AxesImage:
-> 3358     __ret = gca().imshow(
    3359         X,
    3360         cmap=cmap,
    3361         norm=norm,
    3362         aspect=aspect,
    3363         interpolation=interpolation,
    3364         alpha=alpha,
    3365         vmin=vmin,
    3366         vmax=vmax,
    3367         origin=origin,
    3368         extent=extent,
    3369         interpolation_stage=interpolation_stage,
    3370         filternorm=filternorm,
    3371         filterrad=filterrad,
    3372         resample=resample,
    3373         url=url,
    3374         **({ "data": data} if data is not None else {}),
    3375         **kwargs,
    3376     )
    3377     sci(__ret)
    3378     return __ret

File ~\anaconda3\Lib\site-packages\matplotlib\__init__.py:1465, in _preprocess_da
ta.<locals>.inner(ax, data, *args, **kwargs)
    1462 @functools.wraps(func)
    1463 def inner(ax, *args, data=None, **kwargs):
    1464     if data is None:
-> 1465         return func(ax, *map(sanitize_sequence, args), **kwargs)
    1467     bound = new_sig.bind(ax, *args, **kwargs)
    1468     auto_label = (bound.arguments.get(label_namer)
    1469                   or bound.kwargs.get(label_namer))

File ~\anaconda3\Lib\site-packages\matplotlib\axes\_axes.py:5745, in Axes.imshow
(self, X, cmap, norm, aspect, interpolation, alpha, vmin, vmax, origin, extent, i
nterpolation_stage, filternorm, filterrad, resample, url, **kwargs)
    5540 @_preprocess_data()
    5541 @_docstring.interpd
    5542 def imshow(self, X, cmap=None, norm=None, *, aspect=None,
    (...),
    5545         interpolation_stage=None, filternorm=True, filterrad=4.0,
    5546         resample=None, url=None, **kwargs):
    5547     """
    5548     Display data as an image, i.e., on a 2D regular raster.
    5549
    (...),
    5743     (unassociated) alpha representation.

```

```

5744      """
5745      im = mimage.AxesImage(self, cmap=cmap, norm=norm,
5746                               interpolation=interpolation, origin=origin,
5747                               extent=extent, filternorm=filternorm,
5748                               filterrad=filterrad, resample=resample,
5749                               interpolation_stage=interpolation_stage,
5750                               **kwargs)
5752      if aspect is None and not (
5753          im.is_transform_set()
5754          and not im.get_transform().contains_branch(self.transData)):
5755          aspect = mpl.rcParams['image.aspect']

File ~\anaconda3\Lib\site-packages\matplotlib\image.py:912, in AxesImage.__init__(self, ax, cmap, norm, interpolation, origin, extent, filternorm, filterrad, resample, interpolation_stage, **kwargs)
    896 def __init__(self, ax,
    897                  *,
    898                  cmap=None,
(...),
    907                  **kwargs
    908                  ):
    910     self._extent = extent
--> 912     super().__init__(
    913         ax,
    914         cmap=cmap,
    915         norm=norm,
    916         interpolation=interpolation,
    917         origin=origin,
    918         filternorm=filternorm,
    919         filterrad=filterrad,
    920         resample=resample,
    921         interpolation_stage=interpolation_stage,
    922         **kwargs
    923     )

File ~\anaconda3\Lib\site-packages\matplotlib\image.py:261, in _ImageBase.__init__(self, ax, cmap, norm, interpolation, origin, filternorm, filterrad, resample, interpolation_stage, **kwargs)
    248 def __init__(self, ax,
    249                 cmap=None,
    250                 norm=None,
(...),
    258                 **kwargs
    259                 ):
    260     artist.Artist.__init__(self)
--> 261     cm.ScalarMappable.__init__(self, norm, cmap)
    262     if origin is None:
    263         origin = mpl.rcParams['image.origin']

File ~\anaconda3\Lib\site-packages\matplotlib\cm.py:416, in ScalarMappable.__init__(self, norm, cmap)
    414 self.set_norm(norm) # The Normalize instance of this ScalarMappable.
    415 self.cmap = None # So that the setter knows we're initializing.
--> 416 self.set_cmap(cmap) # The Colormap instance of this ScalarMappable.
    417 #: The last colorbar associated with this ScalarMappable. May be None.
    418 self.colorbar = None

File ~\anaconda3\Lib\site-packages\matplotlib\cm.py:605, in ScalarMappable.set_cm(ap(self, cmap)
    596 """

```

```

597 Set the colormap for luminance data.
598
(...)

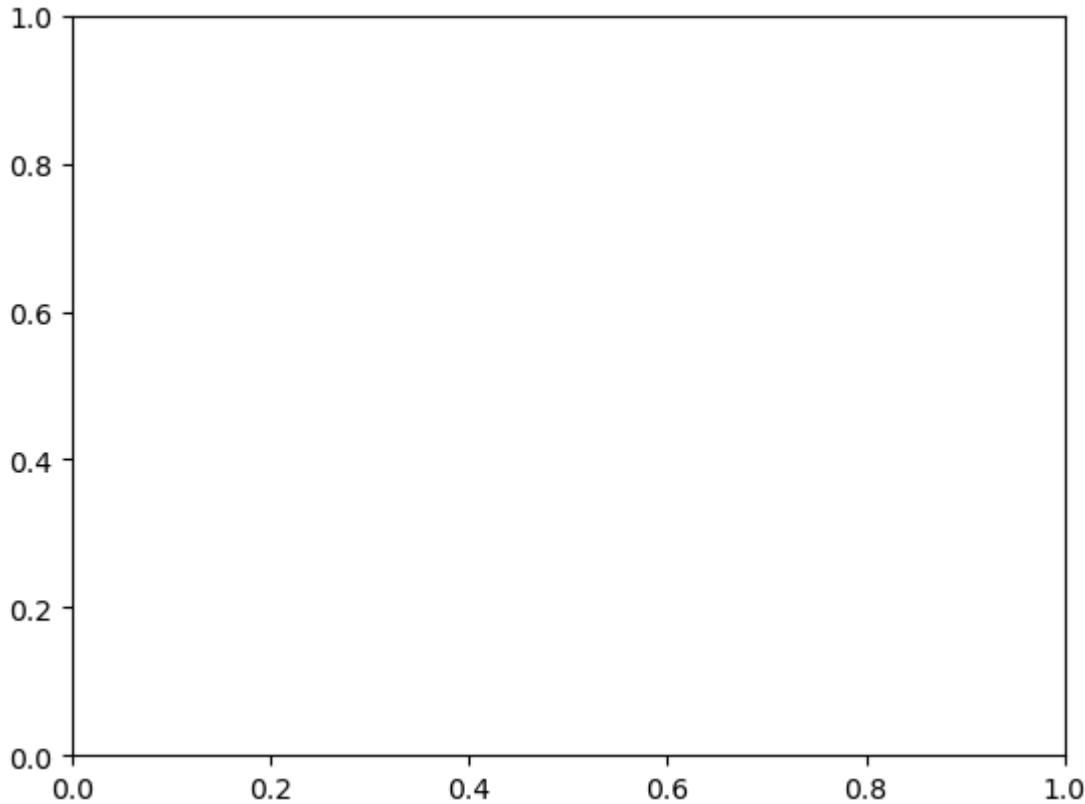
601 cmap : `Colormap` or str or None
602 """
603 in_init = self.cmap is None
--> 605 self.cmap = _ensure_cmap(cmap)
606 if not in_init:
607     self.changed()

File ~\anaconda3\Lib\site-packages\matplotlib\cm.py:744, in _ensure_cmap(cmap)
741 # use check_in_list to ensure type stability of the exception raised by
742 # the internal usage of this (ValueError vs KeyError)
743 if cmap_name not in _cmaps:
--> 744     _api.check_in_list(sorted(_cmaps), cmap=cmap_name)
745 return mpl.colormaps[cmap_name]

File ~\anaconda3\Lib\site-packages\matplotlib\_api\__init__.py:129, in check_in_list(values, _print_supported_values, **kwargs)
127 if _print_supported_values:
128     msg += f"; supported values are {', '.join(map(repr, values))}"
--> 129 raise ValueError(msg)

ValueError: 'Y1Gn' is not a valid value for cmap; supported values are 'Accent', 'Accent_r', 'Blues', 'Blues_r', 'BrBG', 'BrBG_r', 'BuGn', 'BuGn_r', 'BuPu', 'BuPu_r', 'CMRmap', 'CMRmap_r', 'Dark2', 'Dark2_r', 'GnBu', 'GnBu_r', 'Grays', 'Greens', 'Greens_r', 'Greys', 'Greys_r', 'OrRd', 'OrRd_r', 'Oranges', 'Oranges_r', 'PRGn', 'PRGn_r', 'Paired', 'Paired_r', 'Pastel1', 'Pastel1_r', 'Pastel2', 'Pastel2_r', 'PiYG', 'PiYG_r', 'PuBu', 'PuBuGn', 'PuBuGn_r', 'PuBu_r', 'PuOr', 'PuOr_r', 'PuRd', 'PuRd_r', 'Purples', 'Purples_r', 'RdBu', 'RdBu_r', 'RdGy', 'RdGy_r', 'RdPu', 'RdPu_r', 'RdYlBu', 'RdYlBu_r', 'RdYlGn', 'RdYlGn_r', 'Reds', 'Reds_r', 'Set1', 'Set1_r', 'Set2', 'Set2_r', 'Set3', 'Set3_r', 'Spectral', 'Spectral_r', 'Wistia', 'Wistia_r', 'Y1Gn', 'Y1GnBu', 'Y1GnBu_r', 'Y1Gn_r', 'Y1OrBr', 'Y1OrBr_r', 'Y1OrRd', 'Y1OrRd_r', 'afmhot', 'afmhot_r', 'autumn', 'autumn_r', 'binary', 'binary_r', 'bone', 'bone_r', 'brg', 'brg_r', 'bwr', 'bwr_r', 'cividis', 'cividis_r', 'cool', 'cool_r', 'coolwarm', 'coolwarm_r', 'copper', 'copper_r', 'cubehelix', 'cubehelix_r', 'flag', 'flag_r', 'gist_earth', 'gist_earth_r', 'gist_gray', 'gist_gray_r', 'gist_grey', 'gist_heat', 'gist_heat_r', 'gist_ncar', 'gist_ncar_r', 'gist_rainbow', 'gist_rainbow_r', 'gist_stern', 'gist_stern_r', 'gist_yarg', 'gist_yarg_r', 'gist_yerg', 'gnuplot', 'gnuplot2', 'gnuplot2_r', 'gnuplot_r', 'gray', 'gray_r', 'grey', 'hot', 'hot_r', 'hsv', 'hsv_r', 'inferno', 'inferno_r', 'jet', 'jet_r', 'magma', 'magma_r', 'nipy_spectral', 'nipy_spectral_r', 'ocean', 'ocean_r', 'pink', 'pink_r', 'plasma', 'plasma_r', 'prism', 'prism_r', 'rainbow', 'rainbow_r', 'seismic', 'seismic_r', 'spring', 'spring_r', 'summer', 'summer_r', 'tab10', 'tab10_r', 'tab20', 'tab20_r', 'tab20b', 'tab20b_r', 'tab20c', 'tab20c_r', 'terrain', 'terrain_r', 'turbo', 'turbo_r', 'twilight', 'twilight_r', 'twilight_shifted', 'twilight_shifted_r', 'viridis', 'viridis_r', 'winter', 'winter_r'

```



```
In [69]: my_img1[:, :, 0]
```

```
Out[69]: array([[ 9,  9,  9, ..., 29, 29, 29],
   [11, 11, 11, ..., 24, 24, 24],
   [12, 12, 12, ..., 23, 23, 23],
   ...,
   [29, 30, 30, ..., 22, 23, 23],
   [28, 29, 30, ..., 20, 20, 19],
   [23, 26, 28, ..., 19, 18, 17]], dtype=uint8)
```

```
In [70]: my_img1[:, :, 1]
```

```
Out[70]: array([[23, 23, 23, ..., 57, 57, 57],
   [25, 25, 25, ..., 52, 52, 52],
   [26, 26, 26, ..., 51, 51, 51],
   ...,
   [37, 38, 38, ..., 28, 29, 29],
   [36, 37, 38, ..., 26, 26, 25],
   [31, 34, 36, ..., 25, 24, 23]], dtype=uint8)
```

```
In [71]: my_img1[:, :, 2]
```

```
Out[71]: array([[32, 32, 32, ..., 71, 71, 71],
   [34, 34, 34, ..., 66, 66, 66],
   [35, 35, 35, ..., 65, 65, 65],
   ...,
   [50, 51, 51, ..., 40, 41, 41],
   [49, 50, 51, ..., 38, 38, 37],
   [44, 47, 49, ..., 37, 36, 35]], dtype=uint8)
```

```
In [75]: my_img1[:, :, 1]=0
my_img1
```

```
Out[75]: array([[[ 9,  0, 32],
   [ 9,  0, 32],
   [ 9,  0, 32],
   ...,
   [29,  0, 71],
   [29,  0, 71],
   [29,  0, 71]],

   [[11,  0, 34],
   [11,  0, 34],
   [11,  0, 34],
   ...,
   [24,  0, 66],
   [24,  0, 66],
   [24,  0, 66]],

   [[12,  0, 35],
   [12,  0, 35],
   [12,  0, 35],
   ...,
   [23,  0, 65],
   [23,  0, 65],
   [23,  0, 65]],

   ...,

   [[29,  0, 50],
   [30,  0, 51],
   [30,  0, 51],
   ...,
   [22,  0, 40],
   [23,  0, 41],
   [23,  0, 41]],

   [[28,  0, 49],
   [29,  0, 50],
   [30,  0, 51],
   ...,
   [20,  0, 38],
   [20,  0, 38],
   [19,  0, 37]],

   [[23,  0, 44],
   [26,  0, 47],
   [28,  0, 49],
   ...,
   [19,  0, 37],
   [18,  0, 36],
   [17,  0, 35]]], dtype=uint8)
```

```
In [76]: my_img1[:, :, 1]
```

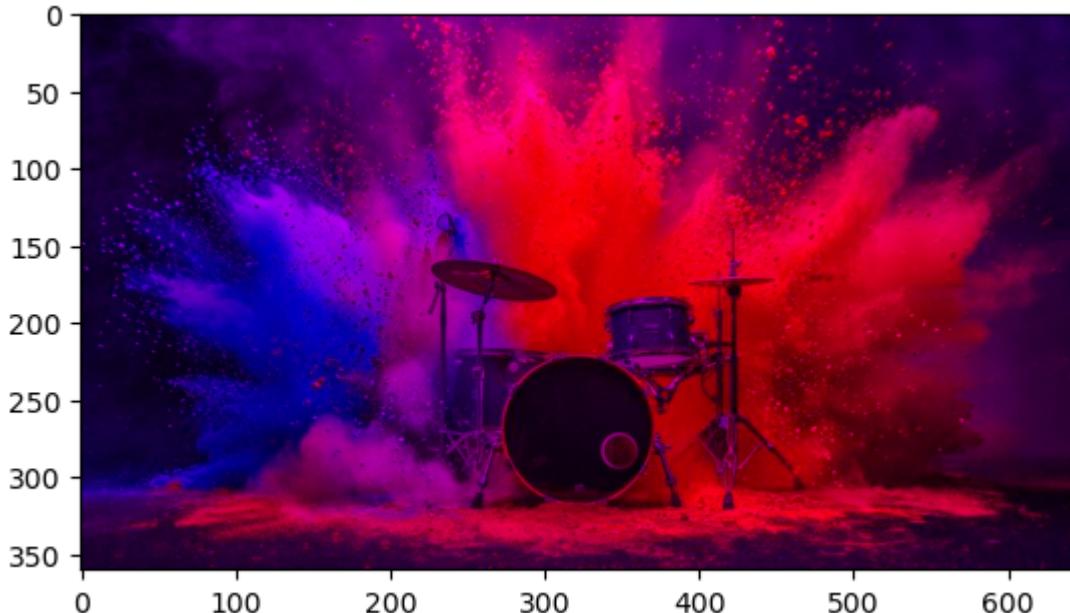
```
Out[76]: array([[0, 0, 0, ..., 0, 0, 0],
   [0, 0, 0, ..., 0, 0, 0],
   [0, 0, 0, ..., 0, 0, 0],
   ...,
   [0, 0, 0, ..., 0, 0, 0],
   [0, 0, 0, ..., 0, 0, 0],
   [0, 0, 0, ..., 0, 0, 0]], dtype=uint8)
```

```
In [77]: my_img1[:, :, 2]
```

```
Out[77]: array([[32, 32, 32, ..., 71, 71, 71],  
   [34, 34, 34, ..., 66, 66, 66],  
   [35, 35, 35, ..., 65, 65, 65],  
   ...,  
   [50, 51, 51, ..., 40, 41, 41],  
   [49, 50, 51, ..., 38, 38, 37],  
   [44, 47, 49, ..., 37, 36, 35]], dtype=uint8)
```

```
In [78]: plt.imshow(my_img1)
```

```
Out[78]: <matplotlib.image.AxesImage at 0x29e1ddca300>
```



```
In [79]: my_img1[:, :, 2]
```

```
Out[79]: array([[32, 32, 32, ..., 71, 71, 71],  
   [34, 34, 34, ..., 66, 66, 66],  
   [35, 35, 35, ..., 65, 65, 65],  
   ...,  
   [50, 51, 51, ..., 40, 41, 41],  
   [49, 50, 51, ..., 38, 38, 37],  
   [44, 47, 49, ..., 37, 36, 35]], dtype=uint8)
```

```
In [80]: my_img1[:, :, 2]=0
```

```
In [81]: my_img1
```

```
Out[81]: array([[[ 9,  0,  0],
   [ 9,  0,  0],
   [ 9,  0,  0],
   ...,
   [29,  0,  0],
   [29,  0,  0],
   [29,  0,  0]],

   [[11,  0,  0],
   [11,  0,  0],
   [11,  0,  0],
   ...,
   [24,  0,  0],
   [24,  0,  0],
   [24,  0,  0]],

   [[12,  0,  0],
   [12,  0,  0],
   [12,  0,  0],
   ...,
   [23,  0,  0],
   [23,  0,  0],
   [23,  0,  0]],

   ...,

   [[29,  0,  0],
   [30,  0,  0],
   [30,  0,  0],
   ...,
   [22,  0,  0],
   [23,  0,  0],
   [23,  0,  0]],

   [[28,  0,  0],
   [29,  0,  0],
   [30,  0,  0],
   ...,
   [20,  0,  0],
   [20,  0,  0],
   [19,  0,  0]],

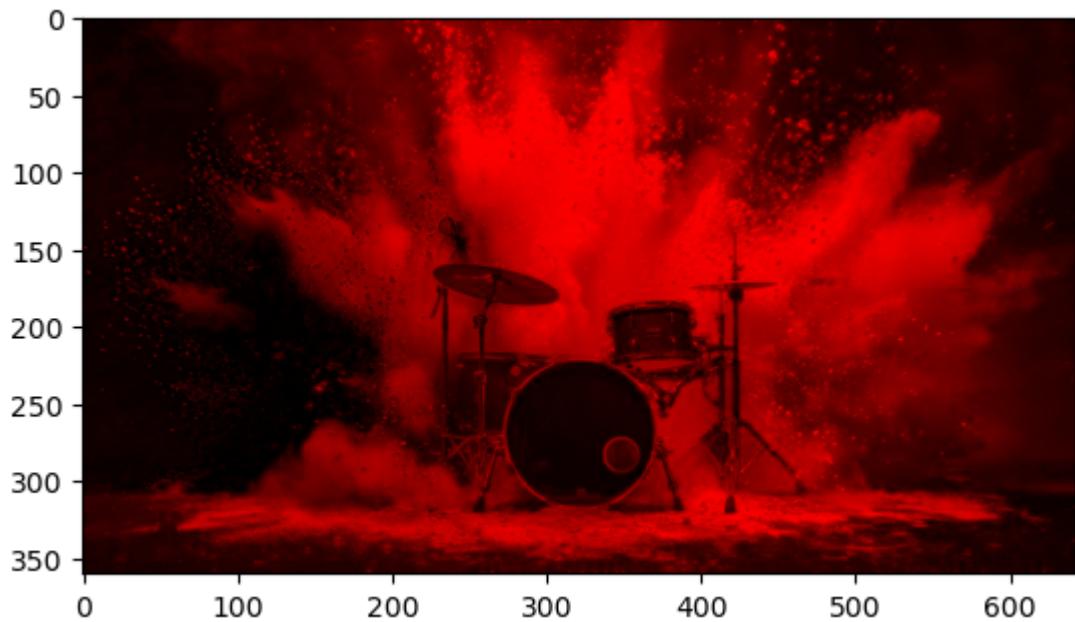
   [[23,  0,  0],
   [26,  0,  0],
   [28,  0,  0],
   ...,
   [19,  0,  0],
   [18,  0,  0],
   [17,  0,  0]]], dtype=uint8)
```

```
In [82]: my_img1[:, :, 2]
```

```
Out[82]: array([[0, 0, 0, ..., 0, 0, 0],
   [0, 0, 0, ..., 0, 0, 0],
   [0, 0, 0, ..., 0, 0, 0],
   ...,
   [0, 0, 0, ..., 0, 0, 0],
   [0, 0, 0, ..., 0, 0, 0],
   [0, 0, 0, ..., 0, 0, 0]], dtype=uint8)
```

```
In [83]: plt.imshow(my_img1)
```

```
Out[83]: <matplotlib.image.AxesImage at 0x29e1ddd1400>
```



```
In [84]: my_arr
```

```
Out[84]: array([[[ 9, 23, 32],
   [ 9, 23, 32],
   [ 9, 23, 32],
   ...,
   [29, 57, 71],
   [29, 57, 71],
   [29, 57, 71]],

   [[11, 25, 34],
   [11, 25, 34],
   [11, 25, 34],
   ...,
   [24, 52, 66],
   [24, 52, 66],
   [24, 52, 66]],

   [[12, 26, 35],
   [12, 26, 35],
   [12, 26, 35],
   ...,
   [23, 51, 65],
   [23, 51, 65],
   [23, 51, 65]],

   ...,

   [[29, 37, 50],
   [30, 38, 51],
   [30, 38, 51],
   ...,
   [22, 28, 40],
   [23, 29, 41],
   [23, 29, 41]],

   [[28, 36, 49],
   [29, 37, 50],
   [30, 38, 51],
   ...,
   [20, 26, 38],
   [20, 26, 38],
   [19, 25, 37]],

   [[23, 31, 44],
   [26, 34, 47],
   [28, 36, 49],
   ...,
   [19, 25, 37],
   [18, 24, 36],
   [17, 23, 35]]], dtype=uint8)
```

```
In [85]: my_img
```

Out[85]:



In [86]: my\_img1

```
Out[86]: array([[[ 9,  0,  0],
   [ 9,  0,  0],
   [ 9,  0,  0],
   ...,
   [29,  0,  0],
   [29,  0,  0],
   [29,  0,  0]],

   [[11,  0,  0],
   [11,  0,  0],
   [11,  0,  0],
   ...,
   [24,  0,  0],
   [24,  0,  0],
   [24,  0,  0]],

   [[12,  0,  0],
   [12,  0,  0],
   [12,  0,  0],
   ...,
   [23,  0,  0],
   [23,  0,  0],
   [23,  0,  0]],

   ...,

   [[29,  0,  0],
   [30,  0,  0],
   [30,  0,  0],
   ...,
   [22,  0,  0],
   [23,  0,  0],
   [23,  0,  0]],

   [[28,  0,  0],
   [29,  0,  0],
   [30,  0,  0],
   ...,
   [20,  0,  0],
   [20,  0,  0],
   [19,  0,  0]],

   [[23,  0,  0],
   [26,  0,  0],
   [28,  0,  0],
   ...,
   [19,  0,  0],
   [18,  0,  0],
   [17,  0,  0]]], dtype=uint8)
```

```
In [87]: my_img
```

Out[87]:



In [88]: arr1 = np.asarray(my\_img)

In [89]: type(arr1)

Out[89]: numpy.ndarray

In [90]: arr1.shape

Out[90]: (360, 643, 3)

In [93]: plt.imshow(arr1)

Out[93]: &lt;matplotlib.image.AxesImage at 0x29e1a3f2d50&gt;



In [94]: drum = arr1.copy()

In [95]: drum

```
Out[95]: array([[[ 9, 23, 32],
   [ 9, 23, 32],
   [ 9, 23, 32],
   ...,
   [29, 57, 71],
   [29, 57, 71],
   [29, 57, 71]],

  [[11, 25, 34],
   [11, 25, 34],
   [11, 25, 34],
   ...,
   [24, 52, 66],
   [24, 52, 66],
   [24, 52, 66]],

  [[12, 26, 35],
   [12, 26, 35],
   [12, 26, 35],
   ...,
   [23, 51, 65],
   [23, 51, 65],
   [23, 51, 65]],

  ...,

  [[29, 37, 50],
   [30, 38, 51],
   [30, 38, 51],
   ...,
   [22, 28, 40],
   [23, 29, 41],
   [23, 29, 41]],

  [[28, 36, 49],
   [29, 37, 50],
   [30, 38, 51],
   ...,
   [20, 26, 38],
   [20, 26, 38],
   [19, 25, 37]],

  [[23, 31, 44],
   [26, 34, 47],
   [28, 36, 49],
   ...,
   [19, 25, 37],
   [18, 24, 36],
   [17, 23, 35]]], dtype=uint8)
```

```
In [96]: drum[:, :, 0] = 0
```

```
In [97]: plt.imshow(drum)
```

```
Out[97]: <matplotlib.image.AxesImage at 0x29e1e1ba090>
```



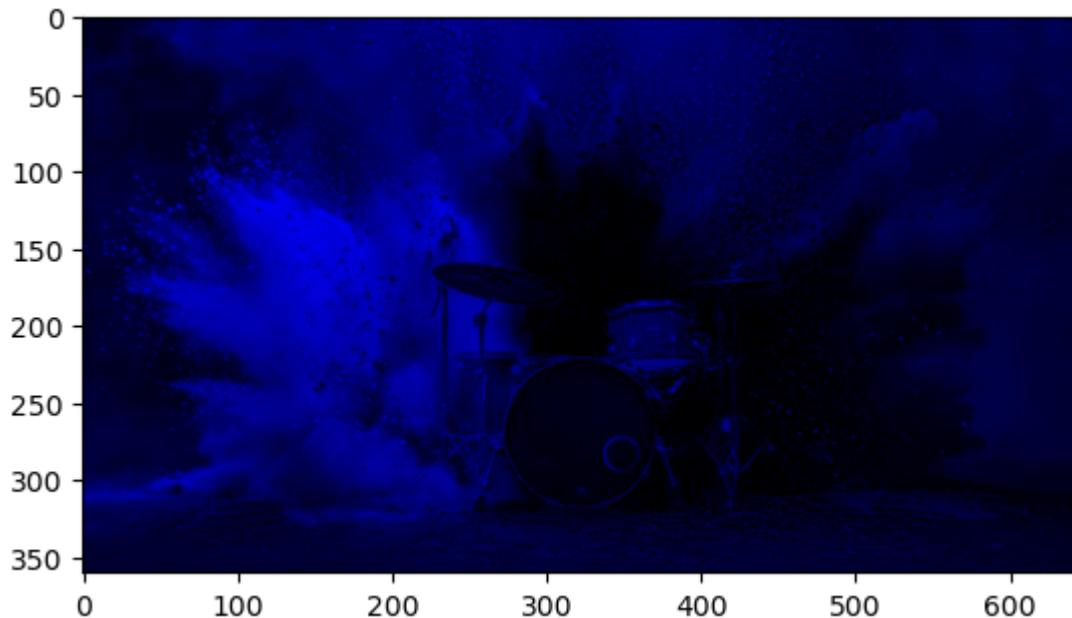
```
In [98]: drum[:, :, 1]
```

```
Out[98]: array([[23, 23, 23, ..., 57, 57, 57],  
                 [25, 25, 25, ..., 52, 52, 52],  
                 [26, 26, 26, ..., 51, 51, 51],  
                 ...,  
                 [37, 38, 38, ..., 28, 29, 29],  
                 [36, 37, 38, ..., 26, 26, 25],  
                 [31, 34, 36, ..., 25, 24, 23]], dtype=uint8)
```

```
In [99]: drum[:, :, 1]=0
```

```
In [100... plt.imshow(drum)
```

```
Out[100... <matplotlib.image.AxesImage at 0x29e1e671eb0>
```



```
In [ ]:
```