

Lesson 2: Reading, Displaying, and Saving Images



Reading an image from file:

```
image = cv2.imread('cat.jpg')
```



Displaying the image in a window:

```
cv2.imshow('Cat', image)
```

```
cv2.waitKey(0) # Waits until a key is pressed
```

```
cv2.destroyAllWindows()
```



Saving the image after modification:

```
cv2.imwrite('cat_gray.jpg', image)
```



Handling errors: imread returns None if the file doesn't exist.



Understanding image structure

- Images are NumPy arrays!
- Shape: (height, width, channels)
- Color channels in OpenCV are in BGR order, not RGB.