TensorFlow Image Generation & Augmentation Functions

tf.image.random_crop: Randomly crops an image to a specified size. Useful for data augmentation by creating different views of the same image.
tf.image.random_flip_left_right: Randomly flips an image horizontally. Helps the model learn left-right invariance.
tf.image.random_flip_up_down: Randomly flips an image vertically. Useful when vertical orientation is not important.
tf.image.random_brightness: Adjusts the brightness of an image randomly to make models robust to lighting conditions.
tf.image.random_contrast: Randomly changes the contrast of an image to improve generalization.
tf.image.random_saturation: Randomly changes the saturation of an image, useful for color-based robustness.
tf.image.random_hue: Randomly shifts the hue of an image to simulate different color conditions.
tf.image.resize: Resizes images to a target height and width, commonly used before feeding data into neural networks.
tf.image.central_crop: Crops the central region of an image, often used during evaluation.
tf.image.rotate: Rotates images by a specified angle to increase rotational invariance.
tf.image.adjust_jpeg_quality: Simulates JPEG compression artifacts by adjusting image quality.
tf.image.adjust_gamma: Performs gamma correction on images to adjust brightness non-linearly.