


Section 8: Data Augmentation

- Center Crop: crops the given image at the center
- Five Crop: crops the given image into four corners and the central drop



- Color Jitter: randomly changes the brightness, saturation, and other properties of an image

- Gaussian Blur:

- Random Rotation  ...

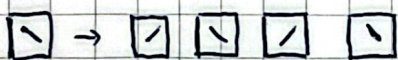
- Random Crop: crops an image at a random location

- Random Resize crop: crops an image at a random location, then resizes the crop to a given size

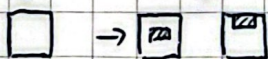
- Random Equalize: randomly performs histogram equalization

- Auto Augment: Automatically augments data based on a given auto-augmentation policy

- Random Horizontal Flip: performs horizontal flip of an image, with a given probability



- Cutout: randomly masking out square regions of input during training



- Mixup: real Image + random image from the batch \rightarrow result



$$\begin{aligned}\bar{x} &= \lambda x_i + (1-\lambda) x_j \\ \bar{y} &= \lambda y_i + (1-\lambda) y_j\end{aligned}$$

- CutMix: patches are cut and pasted among training images where the ground truth labels are also mixed proportionally to the area of the patches.



• Rand Augment: Solves the problem that Auto Augment has