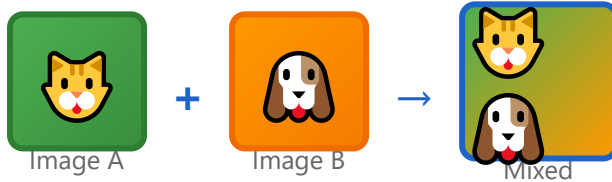


Mixup and CutMix

Mixup

Linear Interpolation



Formula

$$x_{mix} = \lambda \cdot x_i + (1-\lambda) \cdot x_j$$
$$y_{mix} = \lambda \cdot y_i + (1-\lambda) \cdot y_j$$

- ✓ Blends entire images
- ✓ Smooth interpolation

CutMix

Cut and Paste Regions



Mixing Ratio

$$\lambda \sim \text{Beta}(\alpha, \alpha)$$

Paste cut region to another

- ✓ Retains local features
- ✓ More natural appearance

Shared Benefits

Smoother decision boundaries

Improved robustness

Better calibration