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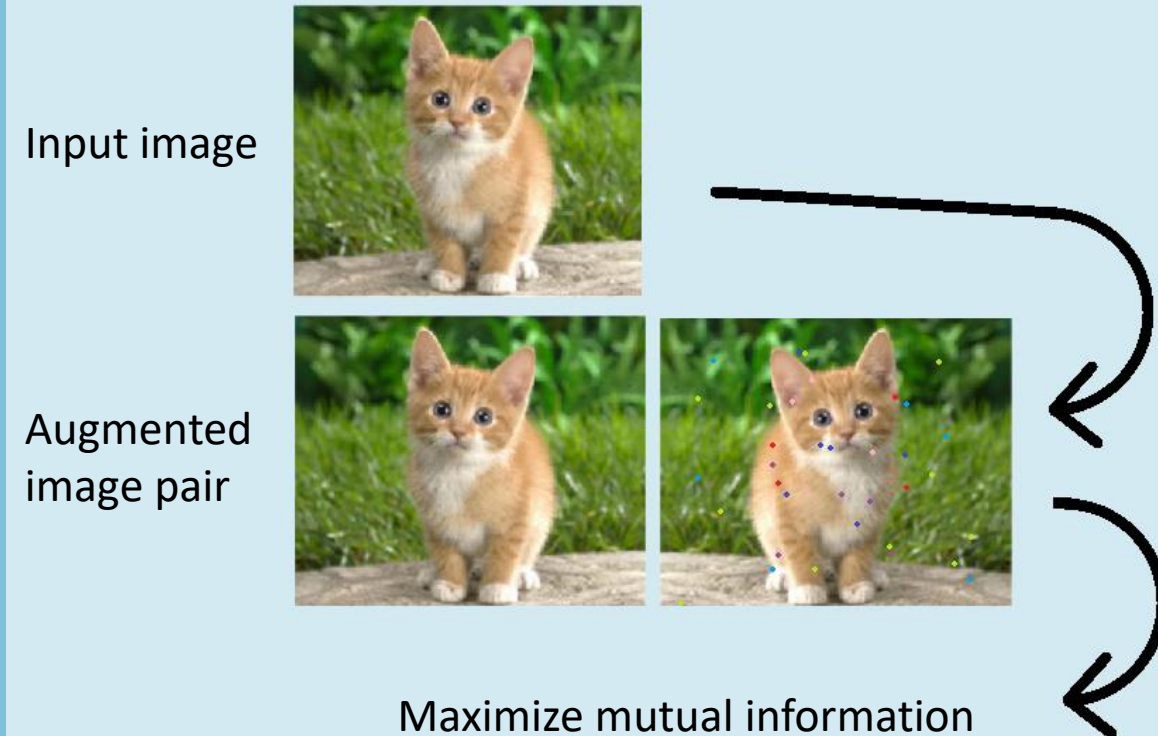CS4240
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Invariant Information Clustering for Unsupervised Image Segmentation

Method

- Input unlabeled image
- Generate augmented image pair
- Maximize mutual information between patches

Input image

Augmented image pair

Maximize mutual information

- The model has now learned how to correctly identify the class of a pixel in an image

Experiment and Result

- Followed procedure to filter COCO3 dataset
- Trained for 24 hours

Original

Ours

- Experiment:
    - Extra criterion of 75% content pixels
    - Trained for same number of epochs as original experiment

Conclusion

- Results were comparable
- Differences:
    - Number of epochs trained
    - Number of heads in the network
- 68% accuracy vs original 72% accuracy

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