Data Augmentation for image classification:

- Flipping (both vertically and horizontally)
- Rotating
- Zooming and scaling
- Cropping
- Translating (moving along the x or y axis)
- Adding Gaussian noise (distortion of high frequency features)
- utilize pretrained nets that transfer exterior styles onto your training images as part of a dataset augmentation pipeline.
- A new type of algorithm called GANs have been stealing headlines lately for their ability to generate content (of all types) that's actually pretty good. Using these types of algorithms, researchers were able to apply image-to-image translation and get some interesting results.

Referenc: https://blog.algorithmia.com/introduction-to-dataset-augmentation-and-expansion/

Data Augmentation for text classification:

1. Synonym insertion is the common one.
Other recent works include:
2. In this paper they use noising in RNNs as a data augmentation
means https://arxiv.org/pdf/1703.02573.pdf
3. Another recent work to synthesis image from texts via GANs. Here they used text encoding interpolations as a means of synthesizing new images. https://arxiv.org/pdf/1605.05396.pdf
https://academic.oup.com/bioinformatics/article/25/13/1602/195842
4. manually creat text data
5. crawl data from the Internet