IMAGE SEGMENTATION USING CLUSTERING

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IMAGE SEGMENTATION

Image segmentation is the process of dividing an image into multiple segments or regions, each of which corresponds to a different object or part of the image, based on various visual characteristics such as color, texture, or edges.

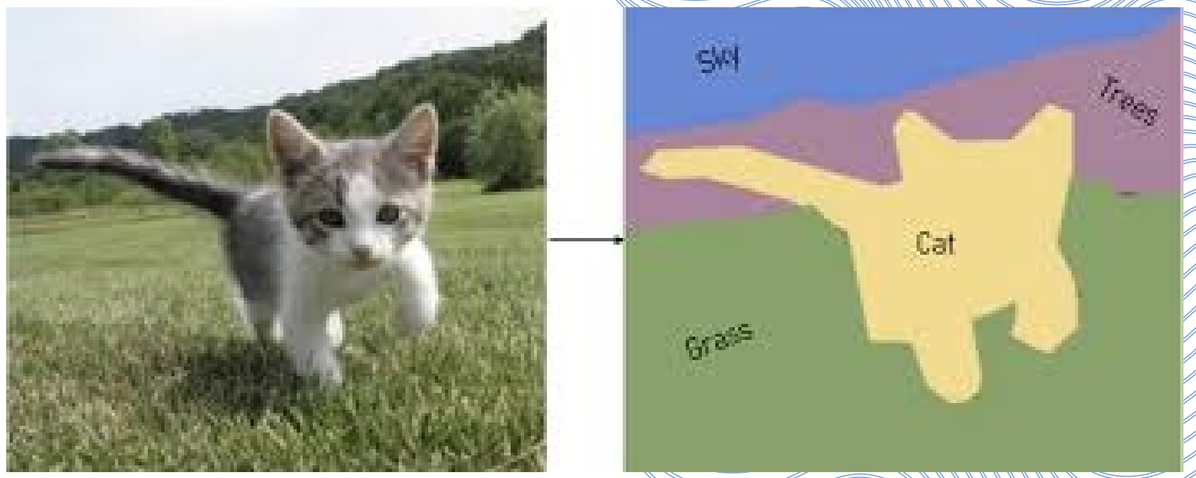

IMAGE SEGMENTATION USING CLUSTERING

- Image segmentation using clustering is a popular technique that involves grouping pixels or regions in an image based on their similarity in color, texture, or other visual features.

- The basic idea is to treat the pixels or regions as data points in a high-dimensional space and apply clustering algorithms to group them into clusters, each representing a segment of the image.

- Clustering-based segmentation can be fast and effective for simple images with distinct regions, but it may not perform well for complex or noisy images, whereas other techniques such as region growing, edge detection, or deep learning-based approaches may be more suitable.

MODELS

- **Invariant Information clustering for unsupervised image classification and segmentation**
- **Feature based image clustering and segmentation using wavelets**
- **Unsupervised learning of image segmentation based on differential feature clustering**

FUTURE WORK

Clustering as Attention: Unified Image Segmentation with Hierarchical Clustering

THANK YOU!