HYBRID DECOMPOSITION CONVOLUTION NEURAL NETWORK AND VOCABULARY FOREST FOR IMAGE RETRIEVAL

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Introduction and Motivation
Proposed Solution: DCNN-vForest
DCNN-vForest Vs State-of-the-art Algorithms: Runtime

- **VOC 2012**
  - BoW
  - DCNN-vForest
  - BoWDNN
  - DVSQ
  - UGACH

- **CIFAR100**
  - BoW
  - DCNN-vForest
  - BoWDNN
  - DVSQ
  - UGACH
DCNN-vForest Vs State-of-the-art Algorithms: Accuracy
Conclusion and Future Perspectives

• Decomposition in bag of Words for solving the image retrieval problem:
  1. Global features: Discard the non similar images.
  2. Local features: Find the most relevant images from the similar images.

• Integrate other DNN architectures: VGG19, RESNET, AlexNet...

• Adopt other clustering algorithms: Fuzzy cmeans, DBSCAN...

• Extend proposed solution in solving large data such as Kitti data.
Teknologi for et bedre samfunn