

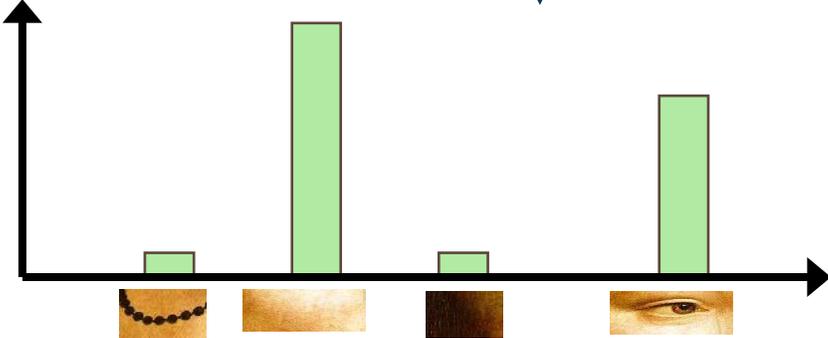
# **HYBRID DECOMPOSITION CONVOLUTION NEURAL NETWORK AND VOCABULARY FOREST FOR IMAGE RETRIEVAL**

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# Introduction and Motivation



Images Database



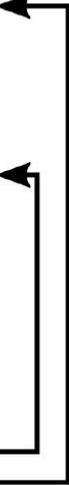
Query



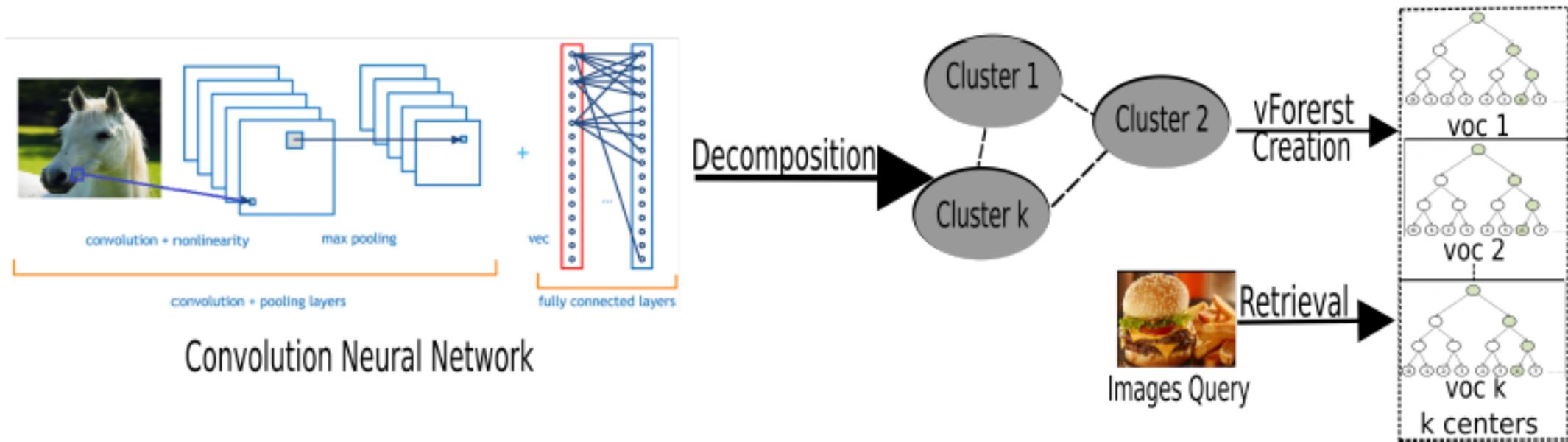
Query



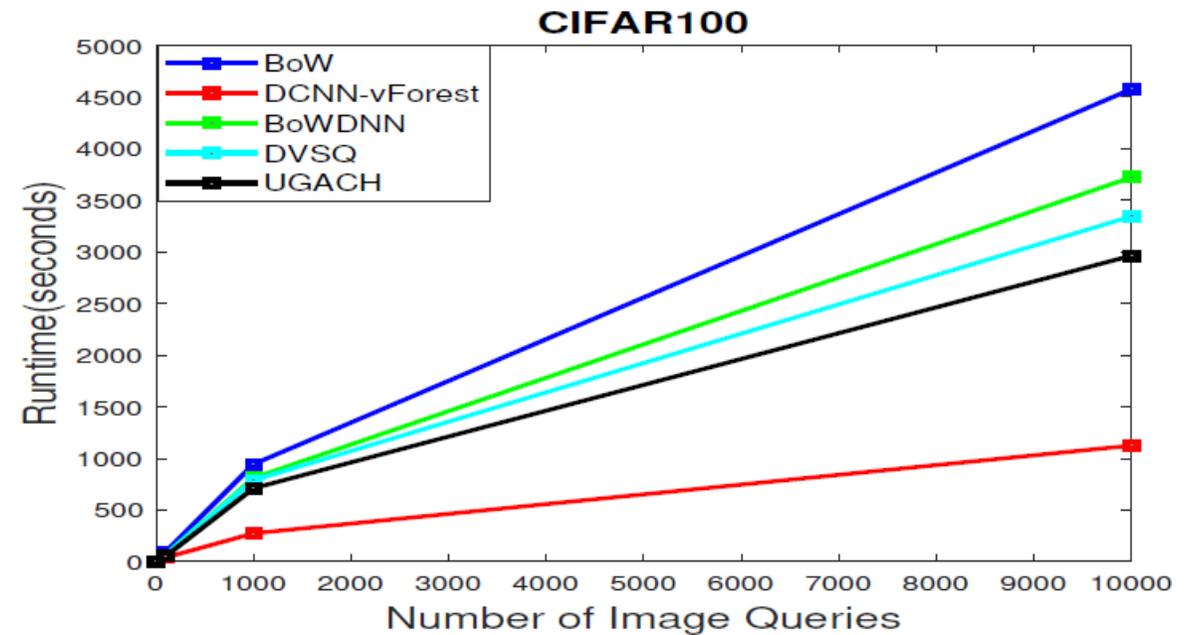
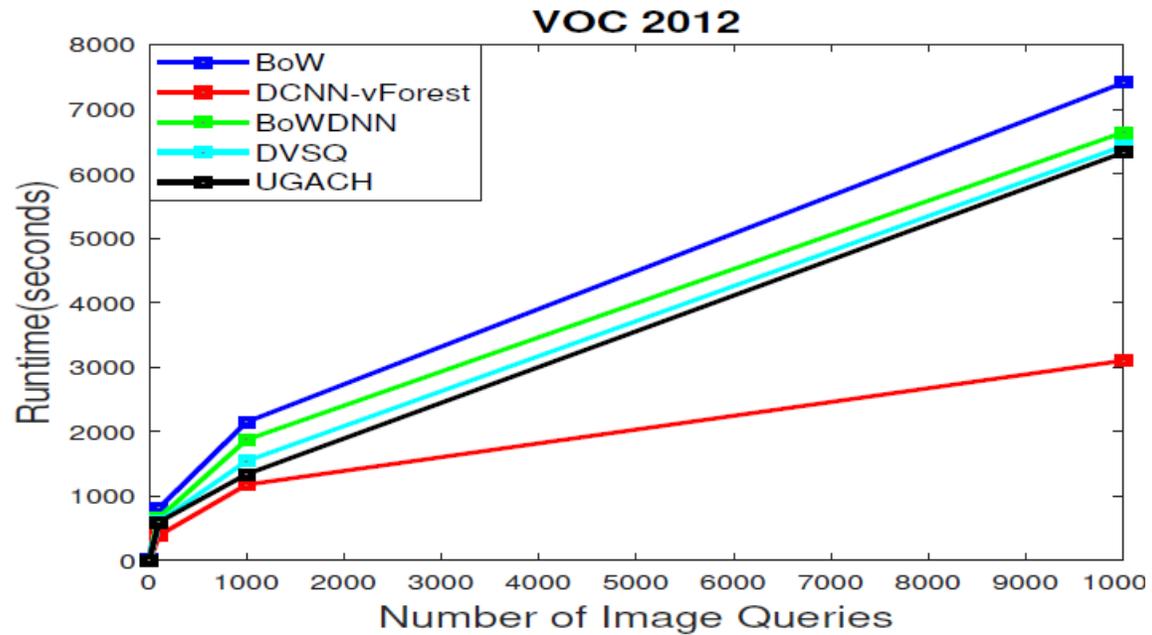
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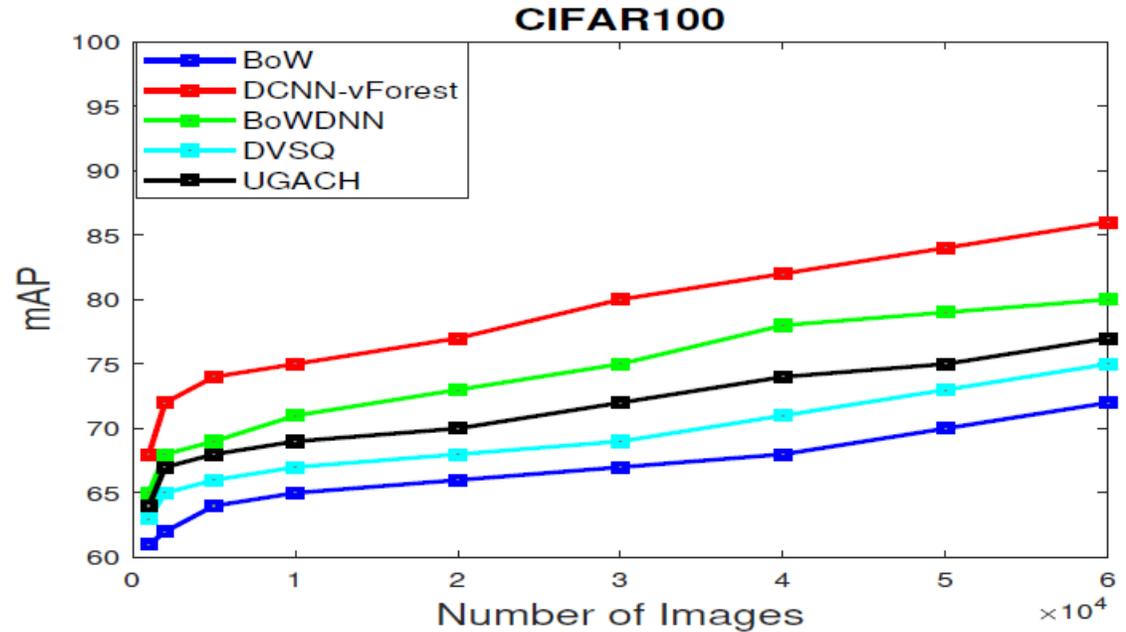
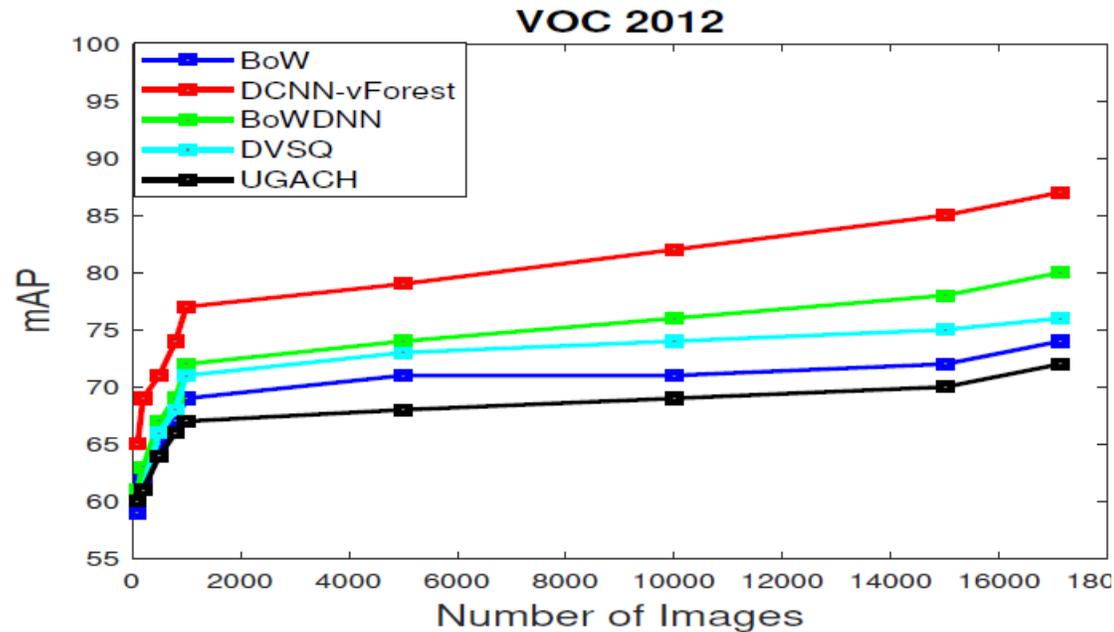
# Proposed Solution: DCNN-vForest



# DCNN-vForest Vs State-of-the-art Algorithms: Runtime



# DCNN-vForest Vs State-of-the-art Algorithms: Accuracy



# Conclusion and Future Perspectives

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- 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.



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