# Review of "ImageNet: A Large-Scale Hierarchical Image Database"

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October 29, 2016

This paper introduces ImageNet, a large-scale, diverse, hierarchical image database as a need for benchmarking robust models, and aiding several critical computer vision tasks, such as Object Recognition, Image Classification and Object Localization. It uses wordnet as a backbone, and provides dense tree-structured subcategories. Imagenet also boasts to contain unprecedented number of examples per category, categories, non-overlapping categories.

To construct the database, the authors first collect vast unclean data from across different search engines, using multiple languages, and appending parent words given the class. They clean the dataset using Amazon Mechanical turk by asking multiple workers to label a given image contains the given object of interest, combining it through a consensus mechanism that modeled semantic difficulty for its category.

Towards the end, authors show three appplications of Imagenet. The first application involving object recognition emphasized importance of having a high resolution large clean dataset. The second application involved image classification setting its focus on importance of dense hierarchical structure. The third application involved object localization, demonstrated Imagenet's prospects to be used in benchmarking object detection algorithms.

In summary, the work provides significant contribution to computer vision research community, with large-scale diverse clean dataset, with unprecedented set of object categories related by dense hierarchies. The authors clearly demonstrate the effectiveness of having such a dataset through appropriate applications. The comparisons with previous related work are very pertinent too.