



Adapting Hierarchical Multiclass Classification to changes in the target concept*

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Abstract—Machine learning models often need to be adapted to new contexts, for instance, to deal with situations where the target concept changes. In hierarchical classification, the modularity and flexibility of learning techniques allows us to deal directly with changes in the learning problem by readapting the structure of the model, instead of having to retrain the model from the scratch. In this work, we propose a method for adapting hierarchical models to changes in the target classes. We experimentally evaluate our method over different datasets. The results show that our novel approach improves the original model, and compared to the retraining approach, it performs quite competitive while it implies a significantly smaller computational cost.

Index Terms—Hierarchical, Classification, Adaptation, Novelty