**ABSTRACT:** In order to overcome the limitations of the purely deductive approaches to query answering from ontologies, inductive (instance-based) methods have been proposed as efficient and noise-tolerant tools. In this paper we propose an original approach based on non-parametric learning: the Reduced Coulomb Energy Network classifier. The method requires a limited training effort (more than nearest neighbor yet less than kernel machines) but can turn out to be very effective in the classification phase. Casting retrieval as the problem of assessing class-memberships w.r.t. the query concepts, we propose an extension of classification algorithm using a Reduced Coulomb Energy Network based on an entropic similarity measure for OWL. Experimentally we show that the behavior of the classifier is comparable with the one of a standard reasoner and is often more efficient than with other inductive approaches. Moreover we show that new knowledge (not logically derivable) is induced.