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## CONCEPT FOR A COMPOUND ANALYSIS IN ACTIVE LEARNING FOR REMOTE SENSING

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**Abstract.** Active learning reduces training costs for supervised classification by acquiring ground truth data only for the most useful samples. We present a new concept for the analysis of active learning techniques. Our framework is split into an outer and an inner view to facilitate the assignment of different influences. The main contribution of this paper is a concept of a new compound analysis in the active learning loop. It comprises three sub-analyses: structural, oracle, prediction. They are combined to form a hypothesis of the usefulness for each unlabeled training sample. Though the analysis is in an early stage, different extensions are highlighted. Further we show how variations inside the framework lead to many techniques from the active learning literature. In this work we focus on remote sensing, but the proposed method can be applied to other fields as well.

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