
Efficient Feature Selection via Online Co-regularized Algorithm

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We propose feature selection algorithm based on online co-regularization approach. We demonstrate that by sequentially co-regularizing prediction functions constructed for each view we are able to efficiently identify landmark features important for the learning process. Furthermore, we evaluate the efficiency and performance of the proposed algorithm on the Human Microbiome Project dataset (Human Microbiome Project 16S rRNA 454 Clinical Production Phase I). In particular we address the task of finding landmark (biomarker) species that are highly predictive of the abundance of Porphyromonas in the oral cavity. In our empirical evaluation the proposed method notably outperforms several feature selection techniques as well as leads to significant computational benefits when training the model.