

Conclusions

We have introduced a new problem, *Ensemble Shadow Classifier Learning* of budgeted adaptive classification and online re-estimation for sensor arrays. The core challenge in such systems is to retain the efficiency of decision-tree style classifiers while allowing online re-estimation as in Bayesian value-of-information (VOI) based systems. We have introduced a suite of optimizations to bridge this performance gap while adding an online component to the VOI setting. Early measurements show substantial performance gains. We anticipate the extension of recent formal results on online adaptive submodular optimization to this setting.

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