

Finding active galactic nuclei through Fink

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The Fink broker contains a series of machine learning based modules, which enables fast processing of the data stream. We present the Active Galactic Nuclei (AGN) module as currently implemented within the Fink broker. It is a binary classifier based on a Random Forest algorithm using features extracted from photometric light curves, including a color feature built using a symbolic regression method. Additionally an active learning step was performed to build an optimal training sample. Two versions of the classifier currently exist treating both ZTF and ELAsTiCC alerts. Results show that our designed feature space enables high performances of traditional machine learning algorithms in this binary classification task.

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