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Classification of Habitable Exoplanets

We investigate the use of probabilistic and non-probabilistic classification methods in determining the likelihood of habitability from basic exoplanet observables. We explore and compare the results from four different exoplanet databases: the Open Exoplanet Catalog, the Extrasolar Planet Encyclopaedia, the NASA Exoplanet Archive, and the Kepler Candidate List. We use the Habitable Exoplanet Catalog as a training set for comparing statistical classification methods. Exploring different parameter spaces and classification algorithms will help to determine the best methods for categorizing planets as our databases grow and statistics improve from future missions.