

Pattern Discovery and Large-Scale Data mining on cosmological datasets

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With next-generation telescopes capturing tens of TB/night of observational data, the role of scalable and efficient data analysis methods have become central to the knowledge discovery process in Astronomy. The diversity and scale of astronomical datasets also presents challenging research problems to the data mining and machine learning community. This poster describes three projects highlighting our recent work in these areas: 1) Current state-of-the-art ML algorithms (SVM, LDA, DNNs) are capable of classifying galaxy morphology at above 90