

Orthogonal polynomial kernels used in support vector machines for data analysis

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Abstract: Classification Support Vector Machines (SVMs in short) are a type of machine learning algorithm used, among other things, for data classification. They use a technique called “maximum margins” to find the optimal hyperplane that separates the different classes of data to classify. These SVMs are especially effective when dealing with binary classification problems. One of the key features of SVMs is their ability to use Kernel functions, which allow to take any given input data and map it to a high-dimensional feature space where linear separation can be more easily achieved. In this general framework, we review the state-of-the-art of how orthogonal polynomials can be used as kernel functions in SVMs. Usually, by using orthogonal polynomials as kernel functions in SVMs, more accurate results can be obtained in data classification. This is a joint work with Nuria Torrado and Edmundo J. Huertas.

References

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