Constructive localized approximation of multivariate functions by neural networks[*]

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Abstract. In this paper, we discuss a constructive localized approximation of multivariate functions by generalized translation networks. Using the idea of B-spline functions, we suggest an approximation order of multivariate functions by the tensor product of B-spline functions using the modulus of continuity. Then we show the approximation possibility of the tensor product of B-spline functions by generalized translation networks. Finally, we demonstrate our theory using numerical results.

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