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Investigating Feedforward Neural Networks with Respect to the Rejection of Spurious Patterns

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Abstract

Abstract : The reliability of feedforward neural networks with respect to the rejection of patterns not belonging to the defined training classes is investigated. It is shown how networks with different activation functions and propagation rules construct the decision regions in the pattern space and, therefore, affect the network's performance in dealing with spurious information. A modification to the standard MLP structure is described to enhance its reliability in this respect.