Comparison of Radial Basis Function and Multilayer Perceptron upon Mushroom Classification

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Abstract

This paper proposes two types of artificial neural networks to classify the mushroom in order to compare the performances of two networks; radial basis function and multilayer perceptron. Mushrooms are inexpensive and available year-round. All forms of mushrooms, dried, canned, frozen or fresh, are healthy. Certainly mushroom field guides that edible ones and avoid the poisonous ones, but often mushrooms are hard to classify. By using mushroom datasets, RBF (radial basis function) and MLP (multilayer perceptron) will classify the input features of mushroom into two classes of edible and poisonous. In this system, mushrooms datasets from UCI(University of California) Machine learning repository. Each mushroom instance consists of seven features that represent the input layer to the neural network. RBF and MLP are compared with training time and accuracy. This system was implemented based on java programming language.