

## On Improving Breast Cancer Prediction Using GRNN-CP

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**Abstract :** The aim of this study is to predict breast cancer and to construct a supportive model that will stimulate a more reliable prediction as a factor that is fundamental for public health. In this study, we utilize general regression neural networks (GRNN) to replace the normal predictions with prediction periods to achieve a reasonable percentage of confidence. The mechanism employed here utilises a machine learning system called conformal prediction (CP), in order to assign consistent confidence measures to predictions, which are combined with GRNN. We apply the resulting algorithm to the problem of breast cancer diagnosis. The results show that the prediction constructed by this method is reasonable and could be useful in practice.

**Keywords :** neural network, conformal prediction, cancer classification, regression

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