World Academy of Science, Engineering and Technology International Journal of Computer and Information Engineering Vol:10, No:06, 2016

3D Receiver Operator Characteristic Histogram

Authors: Xiaoli Zhang, Xiongfei Li, Yuncong Feng

Abstract : ROC curves, as a widely used evaluating tool in machine learning field, are the tradeoff of true positive rate and negative rate. However, they are blamed for ignoring some vital information in the evaluation process, such as the amount of information about the target that each instance carries, predicted score given by each classification model to each instance. Hence, in this paper, a new classification performance method is proposed by extending the Receiver Operator Characteristic (ROC) curves to 3D space, which is denoted as 3D ROC Histogram. In the histogram, the

Keywords: classification, performance evaluation, receiver operating characteristic histogram, hardness prediction

Conference Title: ICCBR 2016: International Conference on Case-Based Reasoning

Conference Location : Venice, Italy **Conference Dates :** June 13-14, 2016