

Review: Nonparametric predictive distributions based on conformal prediction

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1 Paper Profile

- Title: Nonparametric predictive distributions based on conformal prediction
- Author: Vladimir Vovk, Jieli Shen, Valery Manokhin, Min-ge Xie
- Publish Year: 2017

2 Contents in the paper

1. Introduction
2. Randomised and Conformal Predictive Distributions
 - Defining properties of distribution functions
 - Criterion of being a CPs
3. Least Squares Prediction Machine
 - The studentised LSPM in an explicit form
 - The batch version of studentised LSPM
 - The ordinary LSPM
4. A property of validity of the LSPM in the online mode
5. Asymptotic efficiency
6. Experimental Results
7. Conclusions

3 Abstract

In this paper, they have proposed three different LSPM, which is *studentised LSPM*, *batch version of studentised LSPM* and the *ordinary LSPM*, to form the predictive distribution in regression problem. And they have examined the validity and the efficiency of their proposition with artificially generated 1000 samples based on IID assumption.

4 Proposal

5 Paper Structure

6 Conclusions

The present paper proposed the conformal predictive distributions in regression problem, which has advantage over the usual conformal prediction intervals at the point where conformal predictive distributions contain more information and can produce a plethora of prediction intervals.