Abstract

Interval prediction can be more useful than single value prediction in many continuous data streams. This paper introduces a novel Interval Prediction Tree IP3 algorithm for interval prediction of numerical target variables from temporal mean-variance aggregated continuous data. This algorithm characterized by: processing incoming mean-variance aggregated multivariate temporal data, splitting each of the continuous features of the input according to the best mean-variance and making stable interval predictions of a target numerical variable with a given degree of statistical confidence. As shown by empirical evaluations in forest fires data set the proposed method provides better performance than existing regression tree models.

References


**Index Terms**

Computer Science

Information Sciences

**Keywords**

Interval Prediction, Mean-Variance Aggregation, Prediction Tree, Forest Fires.