FORECASTING THE NUMBER OF INCOMING FOREIGN TOURISTS TO INDONESIA USING SUPPORT VECTOR REGRESSION

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Abstract

Tourism is one of the main industries in several countries, including Indonesia. The increasing demand in the tourism industry doesn’t only increase profits in tourism, but also in the other fields. Because the demand in Indonesia’s tourism sector continues to increase from year to year, accurate forecasting of the number of foreign tourists who visit Indonesia is needed for planning the future of Indonesia’s tourism. Therefore, in this study will be implemented SVR forecasting method to estimate the number of tourists who come from different entrances. SVR is used because SVR is able to model the nonlinear relationship. In addition, many previous studies have shown that SVR doesn’t only predict complex nonlinear problems but also offers a high level of forecasting accuracy.

The results obtained from testing are SVR method has very good accuracy with the average NMSE and MAPE values are small, 0.49 and 3.1. With small accuracy, forecasting results are expected to help the tourism industries in making planning more effective and efficient. Besides, SVR method has good enough accuracy in forecasting the directional change of data. It was proofed by the average of DCA test score which is high enough as much as 35.36%.

Keywords— tourism, foreign countries tourists, forecasting, SVR
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