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Departamento de Matemática
Programa de Doutoramento em Matemática

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Data Science for Tourism of Thailand

Thidaporn Supapakorn

Statistics Department, Kasetsart University, Bangkok, Thailand

Abstract. Tourism is one of the significant contributors to Thailand's economy. The tourism industries not only encourage in the production and export of goods which create economic value spreading to a variety of businesses such as hotels, restaurants, transportations, merchandise, souvenir shops, airline dealer, but also promote the employment which contribute the distribution of income. Forecasting the total expenditures of foreign tourists traveling to Thailand is quite essential because it is significant part of the guidance in formulating a tourism policy which is used as a guideline in planning the tourism strategy to contribute the sustainable economic growth. There are many forecasting techniques. Herein, 3 forecasting methods which are the Box-Jenkins, the artificial neural networks, and the combined method of Box-Jenkins and artificial neural networks, are utilized to find the suitable forecasting model and forecasting period of the expenditure from foreign tourists traveling to Thailand. The performance of the forecasting models is done via the criteria of the lowest mean absolute percentage error and the root mean square error.

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