Informatics Institute of Technology in collaboration with University of Westminster, UK.

Inventory Prediction for Hotels Using Machine Learning

A dissertation by

Mr. Dushan Silva

Supervised by

Mr. Cassim Farook

Submitted in partial fulfilment of the requirements for the

BEng (Hons) Software Engineering Degree

Department of Computing

May 2018

Abstract

To run a successful business all the processes within a business should be managed efficiently and some more than the others. One such process is inventory management. In the hotel industry this important as having the right amount of inventory items plays a major role in satisfying the customers. Inventory management has is done mainly by using conventional techniques such as EOQ, periodic review policy and optional replacement policy.

This project is mainly focused on developing a model using machine learning which will help in efficiently managing this process by predicting the amount inventory required for next month. To accomplish this a dataset of closing inventory values was obtained from a reputed hotel in Sri Lanka. Using neural networks and SVR a hybrid model was developed to accomplish this task.

Subject descriptors

Machine learning approaches, neural networks, Time series analysis, Statistical paradigms

Keywords

Machine learning, neural networks