

Using Artificial Intelligence Method to Explore the Important Factors in the Reuse of Telecare by the Elderly

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Abstract : This research used artificial intelligence method to explore elderly's opinions on the reuse of telecare, its effect on their service quality, satisfaction and the relationship between customer perceived value and intention to reuse. This study conducted a questionnaire survey on the elderly. A total of 124 valid copies of a questionnaire were obtained. It adopted Backpropagation Network (BPN) to propose an effective and feasible analysis method, which is different from the traditional method. Two third of the total samples (82 samples) were taken as the training data, and the one third of the samples (42 samples) were taken as the testing data. The training and testing data RMSE (root mean square error) are 0.022 and 0.009 in the BPN, respectively. As shown, the errors are acceptable. On the other hand, the training and testing data RMSE are 0.100 and 0.099 in the regression model, respectively. In addition, the results showed the service quality has the greatest effects on the intention to reuse, followed by the satisfaction, and perceived value. This result of the Backpropagation Network method is better than the regression analysis. This result can be used as a reference for future research.

Keywords : artificial intelligence, backpropagation network (BPN), elderly, reuse, telecare

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