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Application of the LSA technique to determine the priority of alerts from a command and control center

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Abstract

It is essential to determine the alert level in a command-and-control center when someone calls an operator for an emergency since life may be in danger. The alert level is determined based on the evaluation that the operator can perceive during the call. Sometimes, cases can be similar to those previously attended. Therefore, it is helpful that this knowledge can be rescued and applied to new cases. In this context, the Latent Semantic Analysis (LSA) technique can determine the alert level and find the most representative words in each case. Thus, when a new alarm is triggered, the system can

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recommend the alert level with which it is rated. Consequently, a solution based on previous knowledge has been stated. This solution leads to the following methodological process: i) data preprocessing, ii) topic analysis and iii) classification. When this proposal was applied, the results revealed an accuracy greater than 60% in predicting the type of alert based on the text. © 2021 IEEE.

Author keywords

Bag of Words; Classification; Pre-processing; TF-IDF

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