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## Editorial

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Welcome to V16N1 issue of *IJLT*. This issue has three papers. The first paper is ‘Zero-shot image classification based on factor space by Shijie Guan, Qixue Guan and Anqi Yin. According to these authors, in traditional zero-shot learning, the prior knowledge about the attributes is not adequately expressed, and the expressive ability of the attributes themselves is not fully explored. Also, because it is always necessary to manually extract the underlying features, so the dependence on manual labour is high, leading to result relying heavily on classification or clustering algorithms. To overcome the problems, the authors of this paper have designed a new algorithm for zero-shot learning to improve efficiency and better classification performance.

This study applies factor space to the semantic embedding space, maintains the consistency between the high-level semantic and low-level image feature spaces, and establishes a direct connection between the data features and information expressed by images to bridge the semantic gap in zero-shot learning. The factor space of the improved algorithm was applied to the image classification model to improve the traditional convolution neural network model and build a new zero-shot image classification model using the AWA2 experiment data set. A zero-shot image was proposed and compared with the traditional zero-shot image classification method DAP and IAP. These authors argue that the new algorithm not only reduces the operation time but also improves the zero-shot image classification performance. More research is needed to validate the results.

The second paper is ‘A fusion of aspect and contextual information for rating prediction in recommender system using a latent factor model’ by Jitali Patel and Hitesh Chhinkaniwala. This paper proposes a hybrid model to tackle the problem of sparsity and personalised recommendation. In this paper, a hybrid model, named as aspect and context-based latent factor model (ACMF) is proposed to predict user rating on an item based on star ratings provided by users, feature-opinion information, and context information. ACMF mainly consists of three phases: The first phase extracts spam reviews and discards them; the second phase extracts feature and opinions from written reviews and eventually calculates the polarity score of opinions. In the last phase, reviews and context information are aggregated to predict the unknown rating of a user for better recommendations and further improve user experience and address the sparsity problem.

The presented model collectively learns the latent factor model for rating, reviews, and context. It was tested on ratings and reviews downloaded from the Amazon website.

Experimental results show that incorporating sentiment and context aspect in the latent factor model can aid in improving the recommendation performance. In the proposed model, two general contexts, time, and location, are used; however, sparsity increases if a more specific context is selected. The effectiveness of the proposed approach is presented through an extensive experiment on two different product data sets. The experiment result shows that the proposed model efficiently tackles space sparseness and provides better prediction accuracy. It would be good to explore implicit aspect extraction to improve the accuracy of sentiment analysis in the future.

The third paper is 'Toward a better understanding of intentionality in service engineering: a systematic review' by Imane Choukri, Hatim Guermah and Mahmoud Nassar. According to these authors, there are relatively few publications reviewing service engineering research from an intentional perspective and context awareness. This paper presents a systematic review aiming to better understand intentionality in service engineering. It highlights the challenges of context-awareness. The analysis is structured under three focus areas (with dedicated research questions), i.e.,

- 1 How does previous literature represent user intention?
- 2 Which strategy do previous studies use to select intentional services?
- 3 The type of relationship that previous studies defined between context and user intention.

The authors selected and analysed 51 research studies among over 2,420 entries. They analysed the studies individually to classify their main features according to each specific category of data extraction. It is then followed by analysis of each category of studies to reason about potential trends. Finally, they interpreted these findings and their reasons, which allowed them to outline the key challenges for future work. It would be useful to design a situation-centric meta-model improving the relationship between the user's context and the intention as well as investigating intention mining.