Managing Editor's Column

Vol. 32, No. 11

Dear Readers,

I am very pleased to announce today the eleventh J.UCS issue of 2026. In this issue, various topical aspects of computer science are covered in 5 articles by 10 authors from 4 countries (Brazil, Indonesia, Taiwan, Türkiye). As always, I would like to thank all the authors for their sound research and the editorial board for their highly valuable review effort and suggestions for improvement. These contributions sustain the quality of our journal. I would also like to express my sincere thanks to the KOALA Initiative and its team for their financial support, without which the J.UCS team would not be able to publish our journal.

In an ongoing effort to further strengthen our journal, we are highly interested in receiving high-quality proposals for special issues on new topics and trends. Please consider yourself and encourage your colleagues to submit high-quality articles or special issue proposals for our journal.

In this regular issue, I am very pleased to introduce the following 5 accepted articles:

Fagner Leal Pantoja, André Santanchè, and Claudia Bauzer Medeiros from Brazil investigate in their research whether topic models are effective tools for capturing the semantic content of datasets. The results suggest that the topics are effective in representing the main themes of the input datasets. However, some discrepancies remain between automatic evaluation metrics and human interpretation. This supports the view that language models cannot fully capture semantic meaning, as communicative intent (an essential aspect of semantics) may lie outside the training data.

In a collaborative research between Indonesia and Taiwan, Army Justitia and Hei-Chia Wang propose in their article SciRelate, an enhanced framework for related work generation. SciRelate is capable of grouping scientific articles using a clustering method, performing abstractive summarization on these groups, and generating subsection headings that represent their topic. The results show that LDA effectively clusters referenced papers, BART-large-CNN performs the strong Related Work generation, and the proposed TopicFusion-MP consistently outperforms existing keyword extraction models for subsection headings.

Cristiano Welter and Kleinner Farias from Brazil focus in their research on the problem that developing Cloud-of-Things (CoT) applications remains challenging due to heterogeneous technologies and complex deployment requirements. To address these challenges, the article introduces Model of Things (MoT), a model-driven, low-code approach that integrates UML modeling, automated model transformations, and application deployment. A case study demonstrated MoT's feasibility in generating

executable CoT applications, while an evaluation involving 12 participants revealed positive perceptions of its usefulness and ease of use.

Oğuzhan Kırlar and Mehmet Ali Altuncu from Türkiye focus in their work on transformer-based question answering. The article compares ALBERT, RoBERTa, DeBERTa, and XLNet on SQuAD v2.0 to examine their performance, efficiency, and ability to handle unanswerable questions under the same training conditions. The results show that RoBERTa gives the best overall performance, DeBERTa performs best on unanswerable questions, and ALBERT is a suitable option for resource-constrained environments.

And last but not least, Cuneyt Ozdemir from Türkiye focuses on the problem of objective pain assessment which remains challenging due to the subjective nature of pain and inter-subject variability. Therefore, the article proposes a hybrid deep-learning architecture that combines single-channel EEG band-power streams with wrist-worn peripheral biosignals (electrodermal activity, BVP, accelerometry, and skin temperature) using residual 1D-CNN and MLP encoders, aiming to classify four natural pain phenotypes: headache, low back pain, menstrual pain, and no pain. Under a strict subject-wise evaluation protocol on PhysioPain, the model reaches 86.98% accuracy and 87.46% weighted F1 at a latency of about 0.15 ms per sample, outperforming classical machine-learning baselines as well as DenseNet-1D and ResNet-1D, and representing a step toward generalizable, real-time pain-related digital biomarkers.

Enjoy Reading!

Best regards,

Christian Gütl, Managing Editor-in-Chief
Graz University of Technology, Graz, Austria
Email: c.guetl@tugraz.at