Keynote Lecture

Current Progresses in Natural Language Processing

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Professional outline

Rada Mihalcea is a Janice M. Jenkins Collegiate Professor at the Electrical Engineering and Computer Science (EECS) department, University of Michigan, USA. In the same time, she leads the Language and Information Technologies (LIT) research group at this University.

Rada Mihalcea's main research fields include Natural Language Processing, Multimodal Processing and Computational Social Sciences. Her work focused on topics like computational sociolingustics, joint modeling of language and vision, graph-based algorithms for NLP, lexical semantics, multilingual NLP and computational social sciences.

Rada Mihalcea holds two Ph.D. degrees, one in Computer Science and Engineering from Southern Methodist University (2001) and one in Linguistics from Oxford University (2010). Since 1998, Mihalcea has published over 220 articles on topics like semantic interpretation, deception detection or computational humor.

In 2017 Rada become Director of the Artificial Intelligence Laboratory at University of Michigan, Computer Science and Engineering. One year later she was elected as new VP for the Association for Computational Linguistics (ACL). President Barack Obama granted Mihalcea the Presidential Early Career Award for Scientists and Engineers in 2008.

Mihalcea supports diversity in computer science as well as the expansion of the traditional analysis of educational success to include student life, personality and background outside of the classroom. She also leads Girls Encoded, a program which aims to develop the pipeline of women in computer science and also to retain the women who have entered it.

Abstract

Word embeddings have largely been a "success story" in our field. They have enabled progress in numerous language processing applications, and have facilitated the application of large-scale language analyses in other domains, such as social sciences and humanities. While less talked about, word embeddings also have many shortcomings – instability, lack of transparency, biases, and more. In this talk, I will review the "ups" and "downs" of word embeddings, discuss tradeoffs, and chart potential future research directions to address some of the downsides of these word representations.