



DSICCR Tuesday Seminar Series

April 4th, 12pm-1pm, [Webcast Click Here](#)

Semantic Vectors, Then and Now

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Distributed representations – referred to as semantic vectors, or word embeddings - have rapidly become the predominant mode of language representation in computational linguistics. As continuous vector representations, they fit naturally as components of neural network models, and their rise in popularity has accompanied the adoption of deep neural networks across problem domains. However, they also have a longer history predating this wave of popularity, with seminal work in cognitive science probing parallels between associative networks in the mind and proximity in semantic vector space. This talk will provide a personal perspective on the evolution of distributed representations of words, from matrix decomposition to contemporary contextual embeddings. The talk will emphasize their practical advantages over representational alternatives, and how these advantages have been leveraged in support of biomedical informatics applications from modeling clinical notes in psychiatry, through literature-based discovery, to the detection of the linguistic manifestations of psychiatric and neurodegenerative disease.

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