

Natural language processing and Computational linguistics

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Natural language processing (NLP) is a discipline within both information technology (IT) and language sciences that focuses on modelling, processing and analyzing language productions and cognitive processes. As a computer science discipline, NLP defines algorithms, builds language resources, structures and develops software components and tools. NLP tools developed for research can also be used in applied linguistics. After a presentation of the field of natural language processing, we will present some tools originally developed for NLP that have become popular in applied linguistics such as concordancer or text annotation platforms for teaching, as well as tools for computer-based linguistics that have remained at the prototype level. Today, NLP adopts methods based on deep neural networks, which require sophisticated technical skills, but which have enabled NLP to make a qualitative leap forward for tasks such as translation or automatic summarization. The latest neural architectures have an important predictive capability that not only allows for improvement of previous tools, but that could also produce a new generation of more powerful tools for assistance with reading, error detection, or the learning activities.

