



Professor Dr. Chris Biemann, Universität Hamburg

Chris Biemann obtained his doctorate in Computer Science / Natural Language Processing in 2007 from the University of Leipzig, before joining the San-Francisco-based semantic search startup Powerset, which was acquired by Microsoft to form the Bing.com search engine. In 2011, he got appointed as assistant professor for language technology in the computer science department at TU Darmstadt; since October 2016, Chris is professor for language technology at the University of Hamburg in Germany. His current research is focused on adaptive natural language processing in the cognitive computing paradigm, web-scale statistical semantic methods, machine learning from crowdsourcing signals and on applications in the humanities and social sciences. He has co-authored more than 150 peer-reviewed papers in the field of natural language processing. His research group regularly releases open datasets and open source software to the community.

Topic: Adaptive Interpretable Language Technology

Abstract:

Automatic natural language understanding enables natural communication with computers and computer-assisted access to the content of large document collections. While classical approaches to artificial intelligence anticipate all possible situations and interactions in form of a fully specified dialogue model or ontology, they are hard to adapt to new domains and do not cope well with language change.

In this talk, I will motivate an adaptive, purely data-driven approach to natural language processing. Illustrated by recent research prototypes, three stages of data-driven adaptation will be illustrated: feature/resource induction, induction of processing components and continuous data-driven learning with the human in the loop. Finally, I will discuss current research and future directions regarding the integration of symbolic and statistical knowledge, interpretability of language processing components as well as advanced forms of information access. The future of language technology will yield more adaptive, more user-centric technologies than the one-size-fits-all solutions currently being popularized in AI applications such as digital assistants.

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