In brief: Automatic Indexing
Everyone talks about industry 4.0. What does a library 4.0 look like?
The flood of publications rises rapidly. The ZBW researches how to assign keywords to documents automatically.

Methods for automatic indexing
Background

Literature acquired by the ZBW is described with standardised rules and unambiguous subject headings from a special vocabulary, the Standard Thesaurus for Economics. Subject librarians read the texts, put them into context, and assign the subject headings. Libraries call this subject analysis. This is intellectual work done by humans. Recently, it has been supplemented by automatic indexing procedures developed by computer scientists and information specialists at the ZBW. One of these procedures, developed inhouse, combines various methods and indexes documents based on titles and keywords. Another research project currently under way is to see how machine procedures themselves learn to evaluate the quality of their indexing and to improve their results, in order to match the quality of human indexers. This kind of machine learning is the main characteristic of Artificial Intelligence.

Result

Thousands of new publications are published every year. How can they be processed in a way that allows scientists to find literature relevant for their work? This is why describing contents with keywords is useful. This cannot be done intellectually for all newly published documents. Therefore, computer scientists at the ZBW and indexing experts cooperate to find automated solutions based on Artificial Intelligence. An AI software developed at the ZBW automatically indexes all new publications with the keywords assigned by the authors. At the moment, the ZBW cooperates with other libraries to testdrive a prototype of a “digital assistant”. It will support human indexers with machine-generated suggestions.
References:


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