Revealing the Disciplinary Landscape of Data Science Journals

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ABSTRACT

The discipline, field, and practice of data science emerged to its current prominence in the past several decades. New disciplines, fields, and practices often involve definitional and scope challenges. This seems to be the case with data science. The research presented in this poster is part of a broader investigation into the disciplinary or interdisciplinary characteristics of data science. This work-in-progress poster reports the results of analyses of data science journals in different subject areas to answer several questions including:

- What is the population of journals that focus on topics of data science?
- What disciplinary landscape of data science is revealed in the aims and scope statements of these journals?

The unit of analysis in this research is at the journal level. Both quantitative and qualitative approaches were used in the analysis of the aim and scope statements. The quantitative approach used computational methods (e.g., Part-of-Speech Tagging, Word Embedding) to identify keywords representing characteristics of the journal. The qualitative approach used conceptual content analysis to reveal different patterns in terms of research types and the scope of research of the journals.

Data science research and education are part of many library and information science degree programs. The results of this research have the following benefits:

- Researchers can understand disciplinary and research types published in the journals when selecting a venue for submitting papers.
- Educators and students can identify appropriate journal resources to support learning.
- Librarians can use the results to assess collection development decisions regarding data science journals.

ALISE RESEARCH TAXONOMY TOPICS

bibliometrics; data mining; abstracting

AUTHOR KEYWORDS

data science; disciplinary landscape; journal analysis; aim and scope