Discovering the research focus of higher academic institutions

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Abstract

The research focus of an institution indicates the academic strength of the institution. This academic strength goes a long way to determine the quality of academic product expected from such an institution. To this effect, this study aims at analyzing the research publication strength of 70 Nigerian universities that are visible in Scopus database for Computer Science from inception to 22 December 2017. They include 35 federal, 27 state and 8 private universities. This study is divided into two phases; the first phase consists of six major steps in a waterfall model and the second is carried out by adopting a knowledge discovery model using a clustering algorithm for pattern discovery in an unstructured data model. The data source for the analysis is the Scopus indexing database recommended by the Times Higher Education for international ranking of higher institutions. From the first phase, the predominant outlet for each institution was discovered alongside the percentage of publications in the dominant outlet and the number of publications by the institution within the database over the period of the analysis. In the second phase, the predominant areas of research of each institution within the field of Computer Science was determined. In particular, it was observed that such areas as deep learning and data science are under researched. The findings also revealed networking as the most published area in Nigerian universities, and a number of Nigerian computer science scholars engage in application research which link Computer Science with other disciplines with Nigeria and Africa as case studies. The findings from this research can support postgraduate students' decision in making the right choice of institution based on their research interest. It will also serve as an eye-opener for industries in promoting a result-oriented university-industry partnership.

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Information

Keywords

- data mining
- clustering
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- research focus
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