

Research Project - Artificial Intelligence (AI) and Big Data Framework in Higher Education

An Example of AI Algorithm for Benchmarking of Academic Programs

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Abstract:

Higher education institutions have larger amount of data than ever before and they are constantly searching for actionable insights from their data to develop strategies, programs, and policies. Artificial Intelligence (AI) and big data analytics are the technologies that will enable institutions to address their present challenges, as well as predict possible future outcomes. Currently, institutions use AI applications in a variety of ways in learning analytics such as student's performance prediction, and course recommendation. However, AI and big data can be used in other areas to obtain information, support top management, colleges, departments, instructors, and researchers to facilitate data-driven decision making based on better evidence. In this research project, we first investigate different big data resources for higher education, AI algorithms, and different usage scenarios. Secondly, we propose a general big Data framework for higher education institutions to improve programs, policies and decision making. Thirdly, a use-case scenario is presented to demonstrate the benefits of the proposed framework in automating benchmark study for academic courses and programs.

Keywords: AI, Big Data, Machine Learning, Framework, Analytics, Information Management, Policies.