Big data in academia – Why, When and What aspects

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The explosive growth of the digital universe and the big data phenomena that it has generated are fast becoming a major force behind new tools and methodologies to enable capturing, searching, discovery, and analysis of a variety of volumes of real-time data. The clear correlation between big data and academia is undeniably evident as research topics, such as data visualization techniques, text mining, data mining, machine learning, social network analysis, statistics and database architecture, are of great relevance to big data. Consequently, digital universe cosmologists, i.e., data scientists, are becoming essential to this emerging domain. This constitutes a major challenge to academia regarding its role in providing modified curriculums to train a new generation of students and help them cope with new challenges and to collaborate more efficiently and closely with the business environment. To tackle this issue, this paper presents three different aspects in support of the synergy of big data and academia – *why* it is important, *when* is the right time to start, and finally *what* should we do in order to succeed in this mission.

Keywords: Big data, data science, data engineering, knowledge engineering.