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Data science shaping the future of healthcare

Ahmed Abujaber
Hamad Medical Corporation, Qatar

In an article published in the journal Science, Bell et al. (2009) claims that after Newton`s motion law, the experimental research, and the computer simulation paradigms, the techniques that generate knowledge from data (i.e. data science) should be considered the fourth research paradigm. The huge technological advancement in the healthcare industry and the growing adoption of the electronic health records led to the availability of high volume, high velocity and high variety health data. Nonetheless, this exponential growth in health data collection and storage isn't coined with a simultaneous growth in our analytical capacity which limits our ability to uncover potentially useful information from this massive data. Unlike other industries, the adoption of data science analytics is still in its infancy. This limited adoption of data science approaches in healthcare is multifactorial. The decision to invest in data science is strategic and requires deep understanding of the full potentials of these solutions. However, reviewing the literature, majority of the published health data science research is theoretical and presents the authors opinion not necessarily reflective of an institutional position. More importantly, there is very little research about how data science techniques (e.g. big data mining) can help provide clinical evidence and inform the clinical decision making in the era of evidence-based medicine. Therefore, to reap the full benefits of data science approaches, health policy makers, scholars and practitioners have to realize what data science approaches can do economically and clinically and how they can help clinicians make decisions that improve the treatment outcomes and help prevent and cure diseases.

Biography

Ahmed Abujaber is a Registered Nurse in Qatar. He has completed his bachelor's degree in Nursing and a Degree in Business Administration. He has also completed PhD in Business Administration. He has experience in Emergency and Trauma settings in both Jordan and Qatar. He has special interest in Professional Trauma Education being a Regional Directror and Coordinator for the ATLS and ATCN programs. He is currently working as an Assistant Executive Director of Nursing at Hamad Medical Corporation. His research interest is in the applications of predictive big data analytics in healthcare specifically in chronic disease prevention.

Anaween3@yahoo.com

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