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Data driven intelligent analytics in education domain

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In recent times, there is a steady growth in student's personal as well as academic data in the education field. Many universities and institutes have adopted information systems like virtual learning environments, learning management systems and social networks that collect student's digital footprints. This data is both large in volume and diversity. Learning analytics offers tools to facilitate the understanding of different parameters related to student's engagement/motivation, learning behavior, performance, teaching content and learning environment. Such information could help teachers better prepare for the classroom sessions and to deliver personalized or adaptive learning experiences. This, in turn, could enhance student performance. The current literature research states that there is a shift of focus from classroom based learning to a more anytime, anywhere learning; as well as from a teacher as a sole knowledge contributor to agent or learner as a contributor towards learning. The use of intelligent digital tutors/chatbots has taken the learning process to a new level of student engagement, interaction, and learning. Such intelligent data analysis tools/systems make use of data analysis techniques like machine learning, natural language processing etc. along with artificial/cognitive intelligence techniques. The research work identifies the current challenges faced by universities in learning/teaching processes in a real world context and tries to address these problems using data driven intelligent analysis methods. The main goal would be to focus on preparing students as well as lecturers effectively for the classroom lectures; to understand learning needs of students beforehand; to address those needs proactively in a timely manner.

Biography

Prajakta Diwanji is working as a Researcher in Information Systems at University of Applied Sciences and Arts, Northwestern Switzerland (FHNW). She is a first-year Doctoral student at University of Camerino, Italy. Her research interest is in the area of intelligent data analytics in education domain. She has completed her Master's degree in Business Information Systems from FHNW, Switzerland, and Masters in Computer Science at University of Pune, India. She has more than seven years of work experience in IT industry where she has taken up several challenging roles. During this tenure, she has worked with international companies like Roche Pharma, Switzerland and IBM, India etc.

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