

Study of B40 schoolchildren lifestyles and academic performance using association rule mining

ABSTRACT

B40 community school children experience many underprivileged lifestyles which impacted their academic performance. Through data trends and patterns, the education top management can observe the progress of academic performance and the lifestyle relationships of students in a school or nearby school. It can also help to identify the causes of progress or deterioration of the performance of B40 community students. Therefore, a data analytics framework is essential to help decision-makers to see and analyze the changing trends and patterns of academic progress in data and related lifestyles of B40 community students more effectively and accurately. The objective of this study is to design and develop association rules analysis to deduce the relevance of academic achievement and lifestyle among schoolchildren from the B40 family. The analysis framework is established in several stages that involve data collection and processing and transformation, then the design, application and evaluate of the association rules algorithms. The framework is expected to benefit students, teachers and Education Ministry. This study foresees whether educational programs and healthy lifestyle awareness can be designed specifically for the B40 children so as to improve their academic achievement as desired by the government.