

Mining sequences in activities for time use analysis

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Abstract

By providing a complete record of time use for a given population, time use studies enable investigators to test various hypotheses concerning that behavior. However, the large number and variety of activity combinations that are relevant in time allocation choices and, therefore, time use analysis, makes measuring or even fully identifying all of them impossible without the proper data mining tools. In this paper, we propose a framework for mining sequences of activities to capture more complex patterns than those currently available on how individuals organize their days. The proposed framework was applied to the American Time Use Surveys (ATUS) dataset to explore individual time allocation behavior, identifying sequences of activities that are frequent. For example, patterns such as the preferred activities that are performed before and after specific activities (such as paid work or leisure) are discussed in terms of their frequency. Such patterns are not easy to reveal using traditional descriptive analysis.

Palabras clave

Palabras clave de autor: [Time use](#); [sequence mining analysis](#); [data](#)

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[DURATION](#); [ALLOCATION](#); [LEISURE](#); [CLASSIFICATION](#); [TRAVEL](#); [BEHAVIOR](#); [MODEL](#); [WORK](#); [RESTRICTION](#); [ASSOCIATION](#)

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