

## Modelling Web Usage in a Changing Environment

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**Web usage mining** (WUM) aims to analyse and model the browsing behaviour of Web users to discover relevant patterns and knowledge about Web usage. This knowledge can then be exploited to steer Web marketing strategies, to improve Web site usability and in general to provide better service to online customers.

In recent years, with the widespread diffusion of broadband internet and with the vastly growing number of online services, the number of online customers and the amount of browsing (a.k.a. clickstream) data generated by them greatly increased. Processing and modelling huge volume clickstream data in practice poses difficulties for traditional WUM techniques. Efficient **online Web usage mining** algorithms, that process and model the data stream incrementally, on-the-fly, are needed to take up the challenge.

In this book our main goal is to **model the behaviour and changes of the behaviour of Web users over time** considering the aforementioned harsh constraints. Both the design and maintenance of compact and efficient **individual user profiles** and monitoring their changes over time are largely unexplored areas in (online) Web usage mining and this forms the main challenge in our work.