

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELGAUM**



A Project Report on

**“VISUALIZATION OF PATTERNS FROM WEB USAGE
DATA USING DATA MINING TECHNIQUES”**

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ABSTRACT

When users browse a website, they usually try to accomplish a certain task, such as finding information, buying products, registering for classes, and attending classes online. The interaction between the users and the website can give the web engineers insight into the most common user tasks performed on the website. They can learn how most users navigate the website to finish their tasks and what changes can be made to the website structure in order to make the completion of the common tasks easier and faster. Most web servers provide web interaction logs to track the interaction between the users and the website. But such logs are usually designed for debugging purposes and not for the analysis of the website. So there is a need for a deeper conceptual method to analyze the interaction log to reveal information that can be used for enhancing the website structure. In this work, different data mining techniques, along with a rough set learning approach, are presented to enhance website usage. A new active-user-based user identification algorithm was applied to the interaction log to group together records that belong to the same user. The algorithm has a complexity running time of one order faster than other user identification algorithms. In this paper we have used the Markov Model Technique to identify the user behavior and to visualize the patterns.