Abstract

OpenNym: Privacy Enhanced Recommendations Using Group Clustering Techniques

Yasir Mohamed

This project is an investigation into the feasiblility of a system that affords users privacy enhanced browsing. The system, known as OpenNym, would allow users to 'hide in a crowd' while browsing online such that they can subvert individual user tracking by websites while still receiving a personalized online experience.

The premise for this project is that users with similar interests can be grouped together such that recommendations generated for the group are still relevant to the group's users. To achieve this, an unsupervised machine learning algorithm is used to cluster the users. A system for allowing users to browse as a group is also implemented using a browser extension and an accompanying OpenNym server.

The effectiveness of this proposed system is demonstrated by clustering users in a publicly available music dataset and showing recommendations from Spotify for the resulting groups are still accurate.