

USERS' WEB BROWSING BEHAVIOUR INSIDE AND OUTSIDE A TEL SYSTEM

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TEL System

Browser Extension

User Behaviour

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GOALS

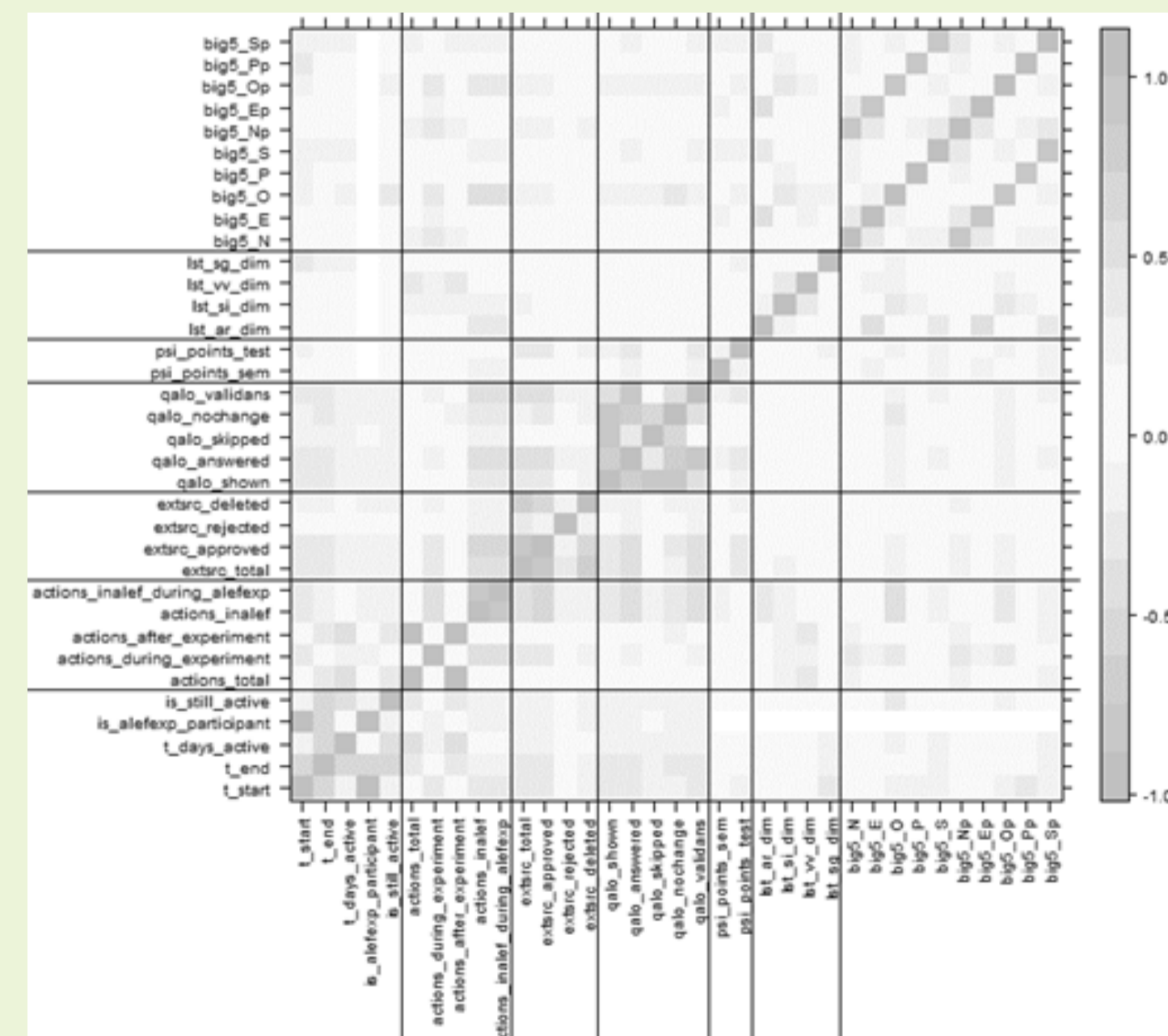
1. Collect dataset on web browsing, include other user traits
2. Analyse how users participate and browse
3. Use parallel web browsing behaviour (tabbing – browsing in tabs) as a new source for:
 - Domain modelling
 - User modelling
 - Recommendation, content linking, etc.

Experiment

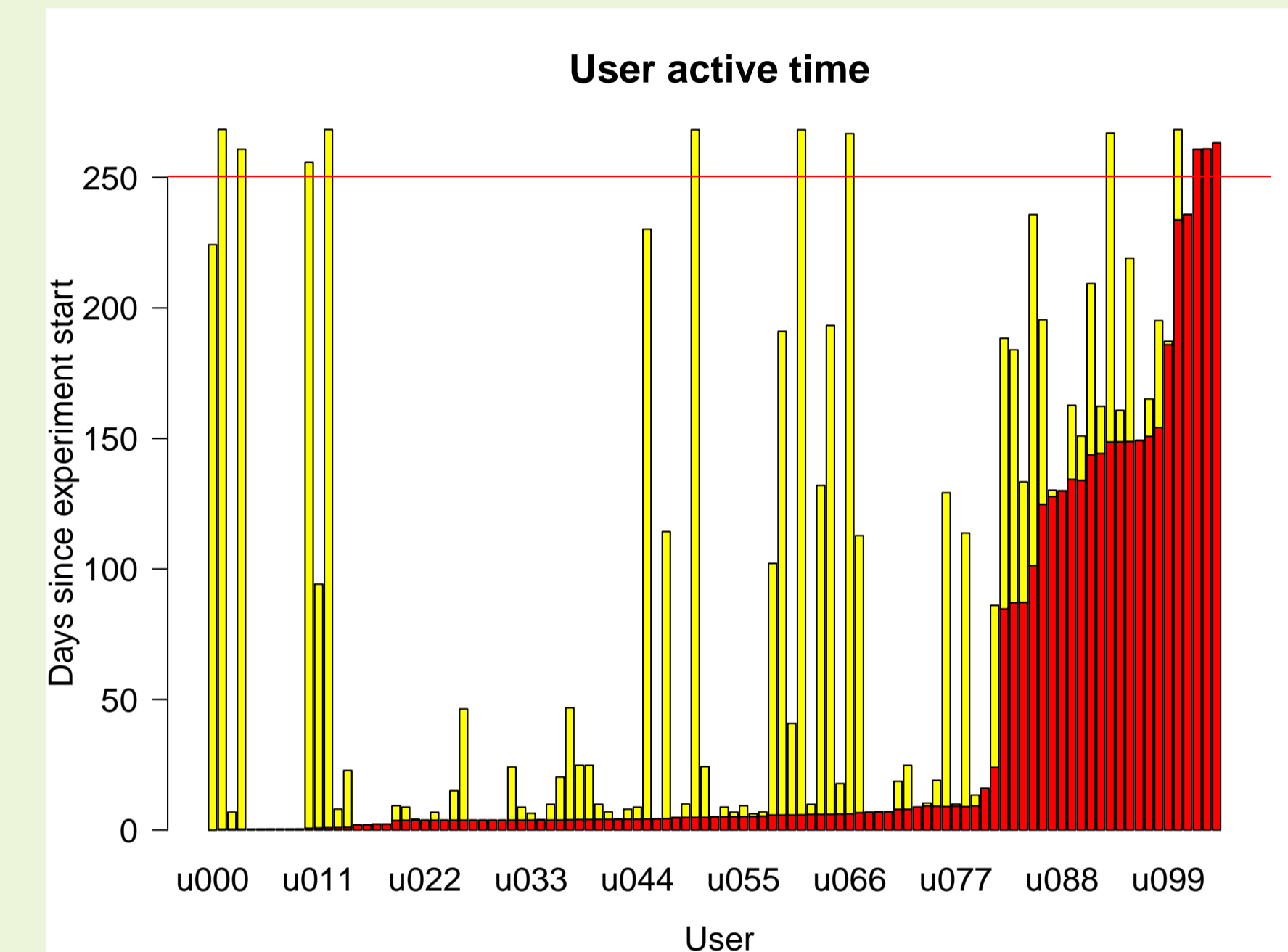
- ALEF: Adaptive LEarning Framework <https://alef.fiit.stuba.sk>
- brUMo: Browser-based user modelling and personalization framework <http://brumo.fiit.stuba.sk>
- In ALEF, users were motivated to augment the content of the learning system with links to external sources, while having their tabbing activity tracked with the browser extension.
- 249 users
 - 80 joined the browsing study being motivated in ALEF
 - 25 joined the browsing study otherwise
 - 144 other ALEF users
- Tabbing is also tracked within ALEF with two mechanisms: browser event logging, and switch pairing.
- All ALEF users

Dataset

Feature	Attributes	Source
Churn	Participation in experiment	Brumo, partially inferred
Browsing actions	Parallel browsing actions	Brumo, ALEF
External sources	Sources submitted	ALEF
Learning activity	TEL system activity	ALEF
Study	Academic performance	Course
Learning style	Felder&Silverman	Questionnaire (ALEF)
Personality	Big Five	Professional assessment



Participation



RESULTS

- Correlation between participation in the study (experiment) and ALEF crowdsourcing activity ("shortparticipating")
- Provide tab usage statistics and tab management within the extension to encourage participation
- Supervised tabbing experiment
- Tab switch pairs within ALEF (242,000 switches)
 - Tab switches rating and aggregation, recommending helpful LOs for the current LO [BP]
- Browsing loops on the open Web
- Automatic relevant external sources detection [DP]