Sustainable-aware explanations in recommender systems (#222184)

Author(s)
This pre-registration is currently anonymous to enable blind peer-review.
It has 2 authors.

Pre-registered on: 2025/04/09 - 05:04 AM (PT)

1) Have any data been collected for this study already?
No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?
Incorporating sustainability-aware explanations and nudging mechanisms into recommender systems enhances the likelihood of users making sustainable choices.

3) Describe the key dependent variable(s) specifying how they will be measured.
The likelihood of selecting the more sustainable item from a set of two is measured as a binary variable. Additionally, we use a 6-point Likert scale to assess participants' perceptions of various aspects of the explanations, such as their persuasiveness, effectiveness, and perceived importance, etc.

4) How many and which conditions will participants be assigned to?
We examine two recommendation domains based on user involvement: low involvement (fashion) and high involvement (hotels). Within each domain, there are five experimental conditions: one control group and four treatment groups, each incorporating a different nudging mechanism.

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
We will employ a fully between-subject design, where each participant is assigned to one condition. For our analysis, we will utilize logistic regression models and nonparametric tests (e.g. Kruskal-Wallis Test)

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.
We will exclude participants who:
- fail to answer all questions
- do not pass attention checks
- complete tasks too quickly (i.e., less than 10 seconds for the task)
- take an excessive amount of time to complete tasks (i.e., more than two standard deviations above the mean participation time).

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.
We will offer the experiment until 300 participants pass the attention checks.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)
Each domain includes 3 matched pairs of items. Each pair is represented in random order. The conditions are randomly assigned to particpants to best ensure randomiaztion