Visualising algorithmic interactions in Xiaohongshu

Kang Chen

Abstract

The design task focuses on how to make the algorithm interactive in the application, so that the user can use the algorithm more efficiently to get a good experience. The design is aimed at the application Xiaohongshu, by analysing its algorithm pushing principles and presenting the algorithm's pushing priority in a visual concept. This allows users to understand the mechanics behind the algorithm and interact with it to tell it what they want to see or not see at the moment. The content is presented as category balls, which are displayed in real time on the For you page, so that users can see in real time how the system is pushing content to them and in what proportion. When the user wants to see more or less content from a certain category, they can adjust the priority by sliding the category sphere to tell the algorithm what the user wants.

Study Methodology

The design process used a combination of quantitative and qualitative research methods.

The quantitative research was primarily a questionnaire: a series of questions at the beginning of the project to understand how people perceive algorithms. This allowed me to quickly understand people's attitudes towards algorithms and how they are perceived to play a role in smart push, so that I could quickly identify design entry points and find pain points for the rest of the research.
The qualitative research was conducted using a specific methodology. The main focus was on on-site interviews. The interviews were conducted by digging a little deeper into the loyal users of Xiaohongshu to capture various user pain points. Finally, these pain points were collated and summarised to identify opportunities to help with the next step of feature design.
Persona: Creating personas based on the pre-questionnaire and interview data to help me understand the needs, experiences, behaviours and goals of the users. Creating personas will help me to identify and understand the users I am designing for.

Testing&Evaluation

1. First test: a coloured card to simulate the interface of Xiaohongshu filled with different labels. Using coloured balls and transparent boxes to convey the concept of how the algorithm works. The testers were given the experience of "seeing" how the algorithm influences intelligent recommendations.
   Results: Testers reported a better understanding of how the algorithm works inXiaohongshu through this approach.
2. Second test: testing the swipe to change recommendation priority function and content browsing via category balls. The result: users can quickly find the category they want with the category ball. In display mode, more users want to click on the category balls to highlight them rather than go to a solo page. This is because they don't want to miss other content even if they have a clear purpose for browsing.
3. The third test: a high-fidelity test in which evaluation questions are asked to obtain an evaluation score to see if the page can be understood and if the functionality provides practical help.
   Result: With a guide page, the testers were able to understand the logic of the interaction and how to use it.

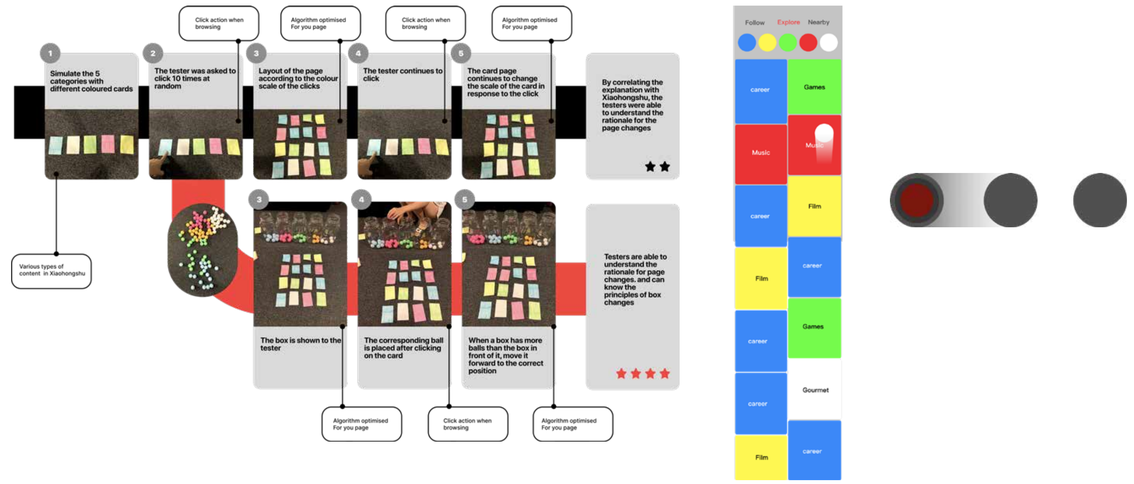
Research Results

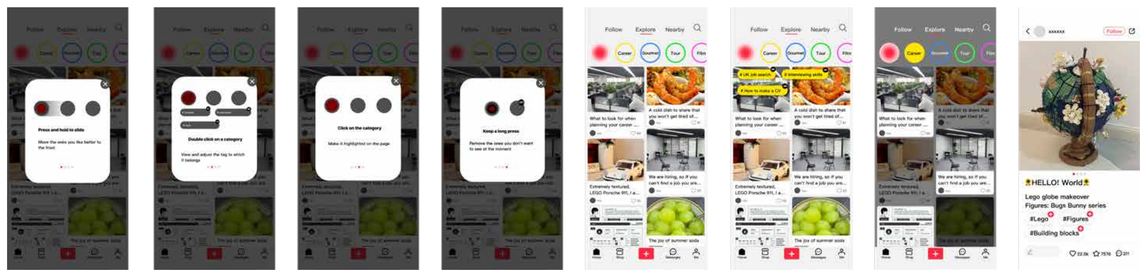
The user is able to understand the design principles as well as being able to perform the task of switching between categories autonomously through the guidance pages. In the final high-fidelity evaluation test, both functionality and ease of use scored 7 out of 10. This confirms the feasibility of the design.

Introduction&Background

Artificial intelligence (AI) supports many of our daily activities and decisions. However personalisation can often produce poor experiences due to lack of awareness, control or cross-gender, algorithmic recommendations. Although there is currently interaction design for user interface feedback functions, there is no real relevance design that incorporates algorithms to present algorithms tangibly, considering the interaction between algorithm and user from a user-centred perspective. The opaque nature of algorithms means that they work mainly 'behind the scenes'. This means that users are unlikely to notice the algorithms in their everyday use until they start producing unexpected, irrelevant or unbelievable results. In this project, I wanted to make the algorithms transparent through an interaction design module. Connecting the algorithm to the user through interaction enables a more human and relevant algorithmic experience.

Diagram/design





Conclusions&Future Work

By adding visual interaction modules the bridge between the user and the algorithm is increased. For users it is easier for them to find the content that suits them. In this way they are able to adapt the content to their desired look one step faster than the algorithm. For Little Red Book, this feature allows it to be used more as a "tool". The fundamental reason for this is that the algorithm is able to guess what the user wants to do next by judging their behaviour. If the prediction does not match the user's expectations, this can have a negative effect. For example, mismatched content predictions flood the For you interface. The fastest way to improve this experience is through user control of the algorithm's predictions.
Looking ahead, algorithmic visualisation will still face many challenges, as one solution cannot be implemented across different algorithmic systems. With different algorithm-driven applications we need to adapt to the actual situation in order to improve the user experience.