

What Are Recommender Systems and Why Do They Matter?

Group 9 - RecBots

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What are your feelings about personalized recommendations on YouTube/Netflix?

- Personalized recommendations on platforms like **Netflix** and **YouTube** can evoke a range of feelings, from appreciation for the convenience and relevance to concerns about privacy and control.
- Some users may feel that the recommendations help them discover new content they enjoy, while others may find the personalization to be intrusive or feel that their autonomy is being undermined.

Types of Recommendations

Lots of options to choose from

Recommender systems provide users with a wide variety of options to choose from, exposing them to content they may not have discovered on their own. This can help users find new and interesting things they enjoy.

What is popular?

Recommender systems often highlight popular or trending content, allowing users to see what others are engaging with. This can help users stay up-to-date with the latest and most relevant information or entertainment.

Have you seen this other similar thing?

Recommender systems can suggest similar or related content based on a user's interests and past interactions. This can help users discover new things they may like, expanding their horizons and providing a more personalized experience.

What do you get recommended?

Recommender systems use various algorithms and data to provide users with personalized recommendations tailored to their preferences and behaviors. This can help users find content that is more relevant and engaging to them.



It knows me? or It knows *ME*?

It knows me. How much? Whaaat!

Data Collection Methods



Internet Scraping

Websites and apps can collect data about users through web scraping, where information is automatically extracted from online sources without the user's explicit consent.



Clicks

Recommender systems can track and analyze a user's click behavior on websites and apps to understand their interests and preferences.



Watch History

Platforms like Netflix and YouTube can collect data on a user's viewing history to provide personalized recommendations.



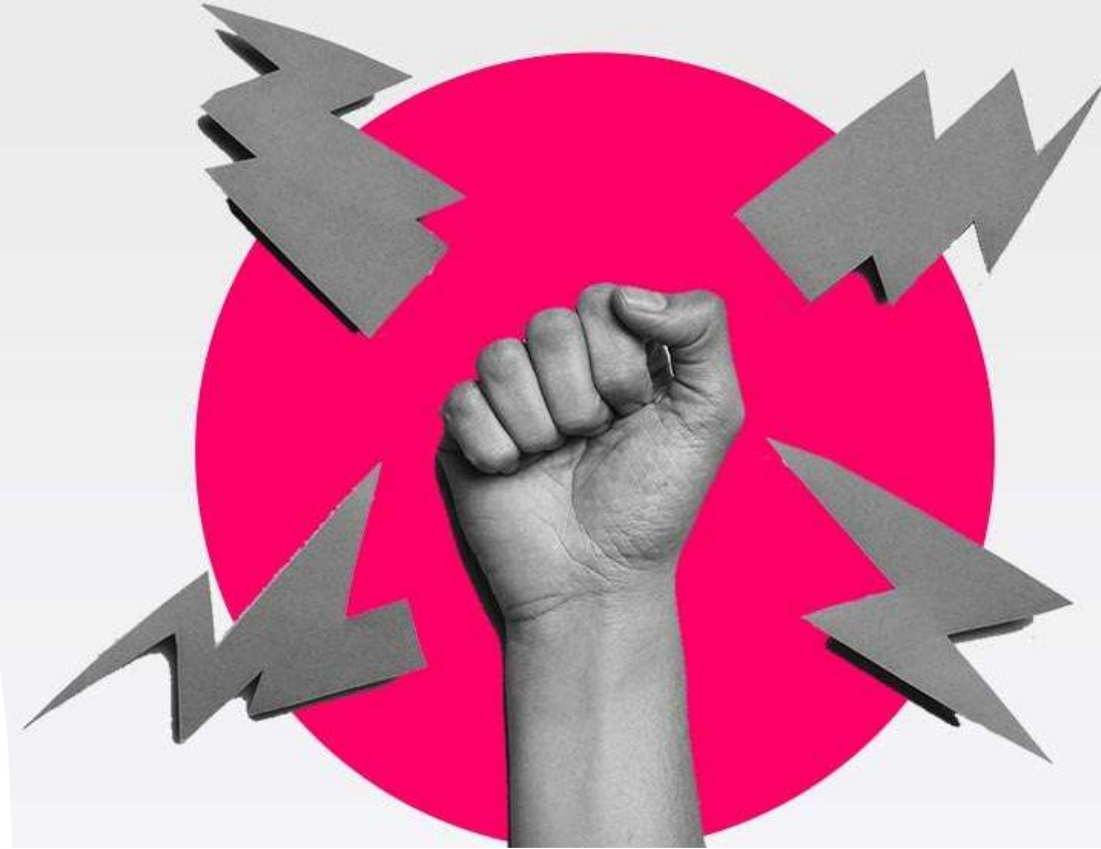
User Consent

Users may be asked to provide personal information through online forms, but it's not always clear how this data will be used by the recommender system.

DANGGGGG!!



Empowerment vs. Intrusion





Empowerment vs. Intrusion

Recommender systems can be a double-edged sword, offering both empowerment and a sense of intrusion. On one hand, they can help users discover new content and expand their horizons, giving them a sense of control and personalization. However, the extensive data collection and profiling required to power these systems can also make users feel like their privacy is being invaded and their autonomy is being undermined.

The personalization and convenience offered by recommender systems can be empowering, allowing users to find content that is tailored to their specific interests and preferences. This can lead to a more engaging and satisfying experience, as users feel that the system "understands" them and is catering to their needs. However, the underlying data collection and algorithmic decision-making can also feel intrusive, as users may not fully understand the extent to which their personal information is being gathered and used to shape their experience.

Cambridge Analytica Scandal

What is it?

- The **Cambridge Analytica scandal** was a major data privacy scandal that came to light in 2018.
- It involved the political consulting firm **Cambridge Analytica** improperly obtaining and misusing the personal data of millions of Facebook users without their consent.

What happened?

- Cambridge Analytica obtained data on over **87 million Facebook users** through a personality quiz app developed by a researcher.
- The firm then used this data to build **detailed psychological profiles** of the users and target them with highly personalized political content.
- This was done without the users' knowledge or permission, raising major **privacy and ethical concerns**.

Impact...

- The scandal led to **intense scrutiny** of Facebook's data practices and the power of data-driven political targeting.
- It resulted in **investigations, fines, and the eventual closure of Cambridge Analytica**.
- The incident highlighted the **risks and potential abuses** of personal data in the digital age.

Individual Profiling

Will they be able to profile me?

The increasing use of recommender systems and data-driven personalization raises concerns about the extent to which individuals can be profiled and their personal information can be accessed without their full knowledge or consent.

How do they know I have diabetes?

The collection and use of sensitive personal data, such as health information, by recommender systems can feel intrusive and raise questions about privacy and data security.

How do they know I am an atheist?

Recommender systems may have access to personal information about an individual's beliefs, affiliations, and ideologies, which can be perceived as a violation of their privacy and autonomy.

How do they know which ideology I believe in?

The ability of recommender systems to profile individuals based on their beliefs, political views, and ideological leanings raises concerns about the potential for manipulation and the erosion of personal freedom.



Bias and Misinformation Campaigns

Racial and Gender Biased Content

Recommender systems have been criticized for promoting content that exhibits racial and gender biases, perpetuating harmful stereotypes and discrimination.

Elections Agenda

There are concerns that recommender systems can be used to push specific political agendas, particularly during election cycles, by selectively amplifying certain viewpoints and narratives.

Clickbait and Misinformation

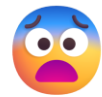
Recommender systems have also been known to promote clickbait content and misinformation, leading users to engage with inaccurate or misleading information.

Do you really have power?

YES!!



No



Maybe



What can you do?

1

Manage Permissions:
Provide minimal access
to your phone

2

On Social Media, you
can control who can
see your posts

3

Use Privacy Tools:
Utilize privacy-focused
browsers and
extensions.

4

Verify Information: Be
critical and verify the
content before sharing.

5

Report Misinformation:
Actively report false
information to help
maintain a trustworthy
online space.

What companies can do?

Algorithmic Fairness

Platforms need to address biases in recommender systems to ensure fair and inclusive content recommendations.

User Control Options

Providing users with control over their data and the ability to adjust or opt out of personalized recommendations can enhance user trust and satisfaction.

Ethical Design Practices

Emphasizing the ethical design and responsible deployment of recommender systems to prioritize user well-being and societal harmony.

Community Feedback

Encouraging user feedback and engagement to improve recommender systems and address user concerns can foster a sense of collaboration and trust.

