

RECOMMENDATION ALGORITHMS ARE EVERYWHERE...



SHETLAND

**SEASON 1
EPISODE 1**



Starts in 0 seconds

Film recommendations are insignificant part of life, but...

Netflix

Twitter/X (Social media echo chambers)

LinkedIn

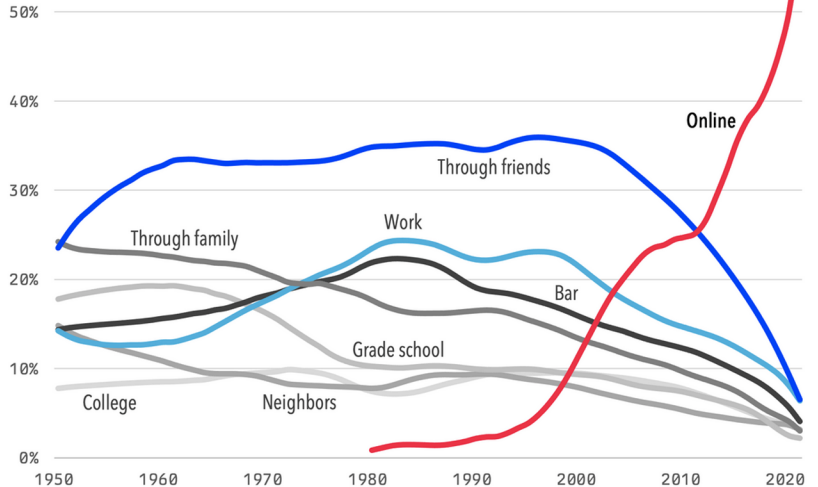
Tinder

*So many options, *need* recommendations...



HOW COUPLES MEET IN THE US

Recommenders increasingly determine human experience:
Who we are...



Source: "How Couples Meet and Stay Together": a longitudinal study of social life in the US by M. J. Rosenfeld, Reuben J. Thomas, and Sonia Hausen

PROBLEMS...

AI recommenders provide convenience, but also capture us in our established preferences and consequently inhibit the discovery of new interests.

So, Netflix constantly proposes similar films, LinkedIn job opportunities replicate past roles, social media platforms connect us with others like ourselves, Tinder repeatedly surfaces the same person, but with a different name. We are trapped inside of who we are.

PROBLEMS...

↳ For individuals: an ethical problem because human freedom is confined by our established preferences. Our ability to change is restricted by our own past.

↳ For society: a solidarity problem because users are funneled into echo chambers of narrow perspectives and polarization. Diversity collapses into tribalism.

↳ For platforms: an economic problem because bored users leave the site.



SOLUTION

Recommendation algorithms re-engineered to catalyze new curiosities, interests, and preferences

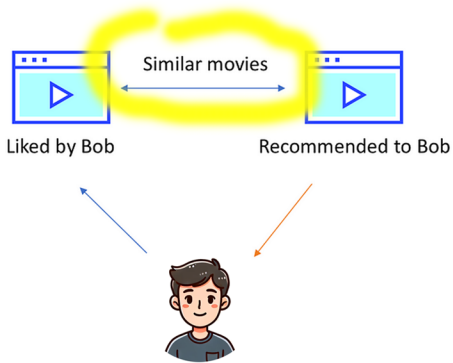


- Expand human choices and freedom (ethics)
- + Diminish social media echo chambers (society)
- + Maintain user engagement (business)

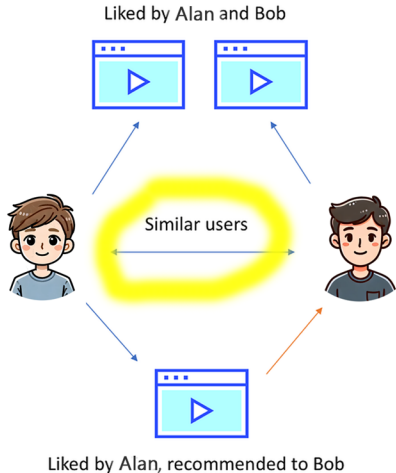
How? (Is this the fundamental human question of artificial intelligence?)

HOW RECOMMENDERS TRAP ME WITH MY OWN PREFERENCES: **NETFLIX**

Content-based filtering

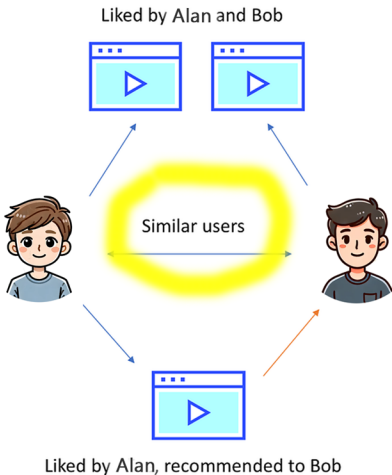


Collaborative filtering

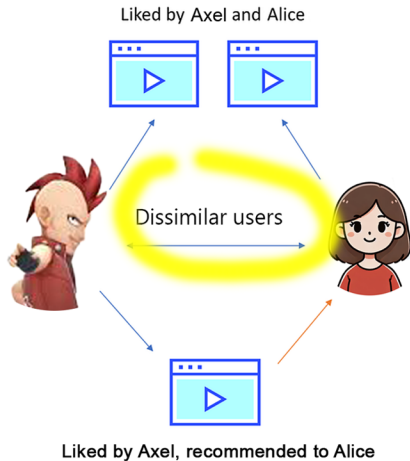


AI: ANTAGONISTIC FILTERING (DIFFERENCE BEFORE SIMILARITY)

Collaborative filtering



Antagonistic filtering



AI: PROVOCATION IS BETTER THAN ACCURACY



Same but different

or

Different but the same = Curiosity

CONCLUSION

Recommendation algorithms can do more than give us what we want, they can also help us to want new things

↳ *Catalyze human freedom*

The Freedom Recommendation



The Curiosity Engine is an NSF funded project in AI
Contact: James Brusseau, Pace University NYC, jbrusseau@pace.edu