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ABSTRACT

This is an exploratory project which aims to better understand the effects that recommendation algorithms on social media platforms such as Twitter, Instagram or Youtube have on the opinion of the users and whether these algorithms can be used to alter opinions of a large group of people.

The methodology used here is of an agent based computer simulation using well known models of social influence and new methods for simulation of recommender systems.

INTRODUCTION

The model presented here is and agent based model of social influence on a network with randomized interaction between agents using a posting mechanism. The agents create posts and a recommender system recommends posts to the agents and agents can change their opinion depending on the content of the post.

MODEL

The model specification is as follows:

Model:

1. Parameters –
2. Number of agents
3. Influence factor
4. Posting probability
5. Number of posts recommended
6. Model runs in discrete time steps.
7. Every agent is updated every time step.

Agent:

1. Parameters:
2. Opinion
3. Interest
4. Confidence bound
5. Each step agent sees n posts.
6. Agent updates its opinion based on the influence function.
7. Adjusts interest value accordingly.