The Domino Effect: TikTok Social Bots Echo Chambers

Project Overview

- An echo chamber is a phenomenon whereby a user only encounters information that reflect their own.

Phenomena of Interest

- Bot-to-bot influence on formation rate and size of TikTok echo chambers
- Likelihood of cross-echo chamber interaction

Simulation Analogies

- Virus on a Network - agents as nodes and interactions as edges
- Schelling Segregation - agents' likelihood to interact with similar agents

Simulation Components

Entities

- Human Agents
- Bot Agents
- Clusters of agents

Affordances, aka interactions

- Engage: view, like, comment, share, follow
- Disengage: dislike, unfollow

Algorithm

Mimic TikTok's recommendation algorithm with a simpler model:

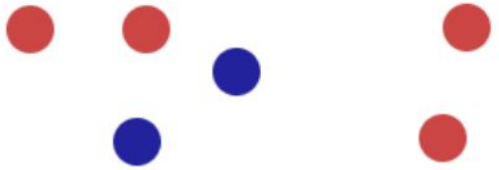
- Agents (dis)engage with one another until distinct clusters are formed

Expected Simulation Output

Variables to be measured

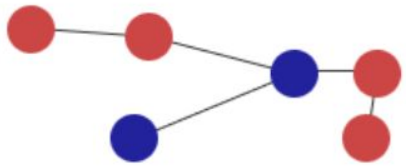
- Ratio of clusters to agents
- Size of distinct clusters
- Number of steps to create clusters
- Number of cross-cluster interactions

Setup
1:2 human:bot ratio, random density



Legend
- Bot Agent
- Human Agent
- Interaction

Steps: Agent Interactions



View Simulation

End: Distinct Clusters Formed