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1 /opt/anaconda3/bin/python /Applications/MSIM
  Assignments/Spring 2025/PR/Final Project/
  MisinformationSpread/main.py
2 --- Running Baseline ---
3
4 Baseline Results:
5 Fake News - Avg Reach: 31.6 ± 17.6
6 Real News - Avg Reach: 20.5 ± 8.1
7 Fake Peak Round: 0.0 (IQR 0.0-1.0)
8 Real Peak Round: 5.0 (IQR 5.0-5.0)
9
10 --- Running Hypothesis 1: Impact of having more
    fact-checkers in the network ---
11
12
13 H1 Results when fact-checker percent is 0.5:
14 Average number of fake news shares: 24.3 ± 10.4
15 Average number of real news shares: 20.7± 8.0
16 Fake News - Avg Reach: 24.3 ± 10.4
17 Real News - Avg Reach: 20.7 ± 8.0
18
19
20 H1 Results when fact-checker percent is 0.7:
21 Average number of fake news shares: 20.6 ± 7.2
22 Average number of real news shares: 21.3± 9.0
23 Fake News - Avg Reach: 20.6 ± 7.2
24 Real News - Avg Reach: 21.3 ± 9.0
25
26
27 H1 Results when fact-checker percent is 0.9:
28 Average number of fake news shares: 18.4 ± 5.7
29 Average number of real news shares: 21.0± 8.9
30 Fake News - Avg Reach: 18.4 ± 5.7
31 Real News - Avg Reach: 21.0 ± 8.9
32
33 --- Running Hypothesis 2: Influencer Behavior
    Variants ---
34
35
36 H2 Results for baseline:
37 Average number of fake news shares: 31.6 ± 17.8
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38 Average number of real news shares: 20.6 ± 7.5
39 Fake News - Avg Reach: 31.6 ± 17.8
40 Real News - Avg Reach: 20.6 ± 7.5
41
42
43 H2 Results for variant_AB:
44 Average number of fake news shares: 38.4 ± 18.3
45 Average number of real news shares: 33.9 ± 10.9
46 Fake News - Avg Reach: 38.4 ± 18.3
47 Real News - Avg Reach: 33.9 ± 10.9
48
49 variant_AB - Influencer Impact when variant A -
Increasing the number of initial influencer seeds
50 Avg reach of fake news from influencers: 32.2 ± 16.8
51 Avg reach of fake news from normal users: 6.1 ± 4.0
52
53
54 H2 Results for variant_BC:
55 Average number of fake news shares: 32.7 ± 19.1
56 Average number of real news shares: 22.1 ± 10.1
57 Fake News - Avg Reach: 32.7 ± 19.1
58 Real News - Avg Reach: 22.1 ± 10.1
59
60
61 H2 Results for variant_CA:
62 Average number of fake news shares: 40.6 ± 20.5
63 Average number of real news shares: 39.2 ± 12.6
64 Fake News - Avg Reach: 40.6 ± 20.5
65 Real News - Avg Reach: 39.2 ± 12.6
66
67 variant_CA - Influencer Impact when variant A -
Increasing the number of initial influencer seeds
68 Avg reach of fake news from influencers: 34.7 ± 19.0
69 Avg reach of fake news from normal users: 5.9 ± 3.6
70
71
72 H2 Results for variant_ABC:
73 Average number of fake news shares: 40.7 ± 19.6
74 Average number of real news shares: 38.8 ± 12.4

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75 Fake News - Avg Reach: 40.7 ± 19.6
76 Real News - Avg Reach: 38.8 ± 12.4
77
78 variant_ABC - Influencer Impact when variant A -
    Increasing the number of initial influencer seeds
79 Avg reach of fake news from influencers: 34.8 ± 18
    .4
80 Avg reach of fake news from normal users: 5.9 ± 3.
    6
81
82 [Belief vs Share for Fake News]
83 baseline - Beliefs: 31.565 | Shared: 31.628 |
    Share Rate: 1.00
84 variant_AB - Beliefs: 37.029 | Shared: 38.357 |
    Share Rate: 1.04
85 variant_BC - Beliefs: 32.66 | Shared: 32.726 |
    Share Rate: 1.00
86 variant_CA - Beliefs: 39.309 | Shared: 40.596 |
    Share Rate: 1.03
87 variant_ABC - Beliefs: 39.361 | Shared: 40.707 |
    Share Rate: 1.03
88
89 --- Running Hypothesis 3: Competitive Interference
    with delay---
90
91
92 H3 Results with a delay of 3 rounds :
93 Average number of fake news shares: 33.4 ± 19.1
94 Average number of real news shares: 39.8± 28.7
95 Fake News - Avg Reach: 33.4 ± 19.1
96 Real News - Avg Reach: 39.8 ± 28.7
97 Fake News Avg Believers : 24.5 ± 11.9
98 Real News Avg Believers: 39.2 ± 28.6
99
100 Belief Revision Count: 10.115
101
102 Process finished with exit code 0
103
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