1. Director

2. predicates:

MovieTitle/2:

- closed

DirectorName/2:

- closed

MovieBlock/2:

- closed

- block

DirectorBlock/2:

- closed

- block

DirectorOf/2:

- closed

SimMovie/2:

- closed

SimDir/2:

- closed

SameMovie/2:

- open

SameDir/2:

- open

observations:

MovieTitle: ./data/movie\_obs.txt

MovieBlock: ./data/movie\_block\_obs.txt

DirectorName: ./data/directors\_obs.txt

DirectorBlock: ./data/director\_block\_obs.txt

DirectorOf: ./data/directorOf\_obs.txt

SimMovie: ./data/sim\_movie\_obs.txt

SimDir: ./data/sim\_dir\_obs.txt

targets:

SameMovie: ./data/sim\_movie\_targets.txt

SameDir: ./data/sim\_dir\_targets.txt

3. // Look for text similarity.

40.0: MovieBlock(P1, B) & MovieBlock(P2, B) & MovieTitle(A1, N1) & MovieTitle(A2, N2) & SimMovie(N1, N2) & (A1 != A2) -> SameMovie(A1, A2) ^2

40.0: DirectorBlock(P1, B) & DirectorBlock(P2, B) & DirectorName(P1, T1) & DirectorName(P2, T2) & SimDir(T1, T2) & (P1 != P2) -> SameDir(P1, P2) ^2

// Pure transitivity

20.0: DirectorBlock(A1, B) & DirectorBlock(A2, B) & DirectorBlock(A3, B)

& SameDir(A1, A2) & SameDir(A2, A3)

& (A1 != A3) & (A1 != A2) & (A2 != A3)

-> SameDir(A1, A3) ^2

// Coauthor rectangle closure.

20.0: DirectorBlock(A1, B1) & DirectorBlock(A2, B1) & DirectorBlock(CA1, B2) & DirectorBlock(CA2, B2) &

& DirectorOf(A1, P1) & DirectorOf(A2, P2)

& DirectorOf(CA1, P1) & DirectorOf(CA2, P2) & SameDir(CA1, CA2)

& (A1 != CA1) & (A2 != CA2) & (P1 != P2)

-> SameDir(A1, A2) ^2

// Paper rectangle closure.

10.0: DirectorBlock(A1, B1) & DirectorBlock(A2, B1)

& DirectorOf(A1, P1) & DirectorOf(A2, P2)

& SameMovie(P1, P2) & (A1 != A2)

-> SameDir(A1, A2) ^2

// Self-refernece.

SameDir(A, A) = 1.0 .

SameMovie(P, P) = 1.0 .

// Negative priors.

1.0: !SameDir(A1, A2) ^2

1.0: !SameMovie(A1, A2) ^2

4. precision: 0.78

recall: 0.28

f1: 0.41