1. BACKGROUND

- Users rely on social media to fulfill two common needs
- Friend recommendation is a key approach to help people fulfill the two needs
- Current friend recommendation methods are mainly based on structure information and content similarity; they do not explicitly explore a user’s unfulfilled informational need

2. PROBLEM DEFINITION

- Informational friend recommendation: recommend friends who can fulfill the target user’s unfulfilled informational need in future

3. OUR APPROACH

1. Explore a user’s unfulfilled informational need
   Collaborative filtering techniques are commonly used in recommendation systems to explore users’ potential interests

2. Rank friend candidates by informational-utility
   The users in a recommendation list should cover as many different aspects of informational need as possible
   - modified informational utility: $ZL(u,v) = \frac{\sum_{i=1}^{n} w_i (t_i)}{\sum_{i=1}^{n} w_i}$
   - greedy selection

4. EXPERIMENTAL RESULTS

- Experiment setup
  - Digg dataset
  - Separate posts by time
  - Evaluation measure for friend recommendation

- Results of CF methods
  - model-based CF methods work better than neighborhood-based CF methods
  - the methods based on ranking loss are better than regression loss
  - we use the result of Rank-SVD in next experiments

5. EXPERIMENTAL RESULTS

- Results of recommendation lists

6. CONCLUSIONS

- Main contributions
  - Propose to conduct friend recommendation according to a user’s informational need
  - Utilize CF to capture a user’s unfulfilled informational need and propose two ranking strategies according to informational utility
  - Experiments show that our method significantly outperforms the current state-of-the-art friend recommendation methods

- Future work
  - Investigate how to conduct informational friend recommendations with a unified approach