Matchmaking For Health
Facilitating mentoring in peer health communities

**Motivation**
Finding the right mentor in an online health community is challenging

- How will chemotherapy affect my joints?
- Who in this community can answer my questions?
- Who has experiences that I can learn from?

Mentor matching connects patients with helpful, experienced peers
- Social matching tools provide personalized mentor recommendations
- Illustrate factors that make a good match between peers
- Facilitate good matchmaking and connect peers for mentorship
- Help ‘newcomers learn what to expect’ and help ‘veterans to give back’

**Approach**
1. Process posts to extract characteristics in individual mentoring profiles
   - Extract health interests using MetaMap with select UMLS semantic types
   - Extract personal qualities using Linguistic inquiry & word count (LIWC) for sentiment analysis
   - Extract interpersonal connections using social network analysis

2. Recommend peers as potential mentors
   - Social matching algorithms
   - Personalized mentor recommendations
   - Informative mentoring profiles
   - Different mentoring contexts
     - One-on-one buddy system
     - One-shot anonymity
     - Group campaign

3. Evaluate mentor matching with participants
   - What characteristics are important for a good match?
   - What types of mentoring contexts do people prefer?
   - What types of automatically extracted information do people want to see and what are they willing to share?

**Social Matching Algorithms**: Developed algorithms to recommend candidate peer mentors based upon health interests, demographics, and personal style

**Text Extraction Techniques**: Developed text processing pipeline to determine health interest personal style profiles based on online community posts

**Interactive Prototyping**: Developed visualizations of profiles using word cloud, timeline, and text based approaches

**Studies**:
- Evaluating text extraction process
- Validating health interest profiles
- Understanding needs and preferences of community peers
- Assessing peer mentor recommendations with patients
- Understanding characteristics of posts that encourage community participation

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