Artificial Intelligence Techniques

Internet Applications 4

Plan for next four weeks

- Week A – AI on internet, basic introduction to semantic web, agents.
- Week B – Microformats
- Week C – Collective Intelligence and searching 1
- Week D – Collective Intelligence and searching 2

Aims of sessions
Ways of using Collective Intelligence 1

- Taken from Alag(2009)
- Lists
  - Create lists generated by users.
- Ratings and recommendations (see last week)
- From blogs, wikis, etc
  - Extracted from contributions from users.

Ways of using Collective Intelligence 2

- Tagging, voting, bookmarking*
  - CI of users can be ‘bubble up’ interesting content
- Clustering*
  - Clustering users and items, predictive models

Taken from Alag (2009)
Basic CI algorithms and issues

- Need common language.
- Content-based
  - Relevance is anchored in the content.
- Collaborative
  - Users’ interaction to discern meaning.

User Profiles

- User profiles contain attributes
  - Can be of different types
  - Range of same type can be wide.
  - Not all attributes are equal
  - Need to normalise data depending on the learning algorithms.
As well as ‘personal’ data, might include for example:
- What they clicked on
- Average time on a page
- Items clicked on
- Items purchased

Stemming
- Terms and phrases in a document form the representation of the content.
  - Terms and their associated weightings – term vectors
  - Similarity of terms is dependent on these term vectors.
  - How would you do this?

Web 2.0 to Web 3.0
- “CI is the core component of Web 2.0” Alag (2009)
- Web 3.0 is expect to have artificial intelligence at its core.
- Is there a link between CI and Web 3.0?
References