

Topical Semantic Recommendations for Auteur Films

Christian Rakow, Andreas Lommatzsch, and Till Plumbaum

www.dai-labor.de

Motivation

With the ubiquity of fast internet connections and the growing availability of Video-On-Demand (VOD) services powerful recommender systems are needed. Traditionally used CF-based approach require comprehensive ratings, tend to suggest well-known movies, and do neither consider current trends nor the context. We present a system identifying interesting events in the stream of current news and deploying this information for computing recommendations. Our system gathers topics of interest from Twitter and RSS-Feeds, extracts relevant Named Entities, and uses semantic relations for recommending movies closely related to these topics.

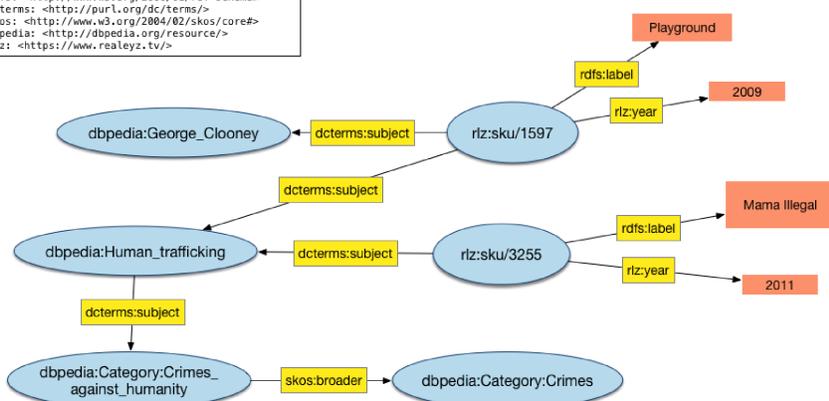
Approach

1. We use news feeds reporting on the domain and Twitter accounts of domain experts as data source.
2. Semantic Data on the domain is collected, news and tweets are processed to look for current trends.
3. Collected events are stored and connected to a certain date.
4. Each day, we look for connections and similarities between events and movies in the movie catalogue.
5. All movie-event pairs are stored and assigned a score based on relevance of the event.
6. Sets of recommended movies are created either per event or per type, depending on the number of pairs.

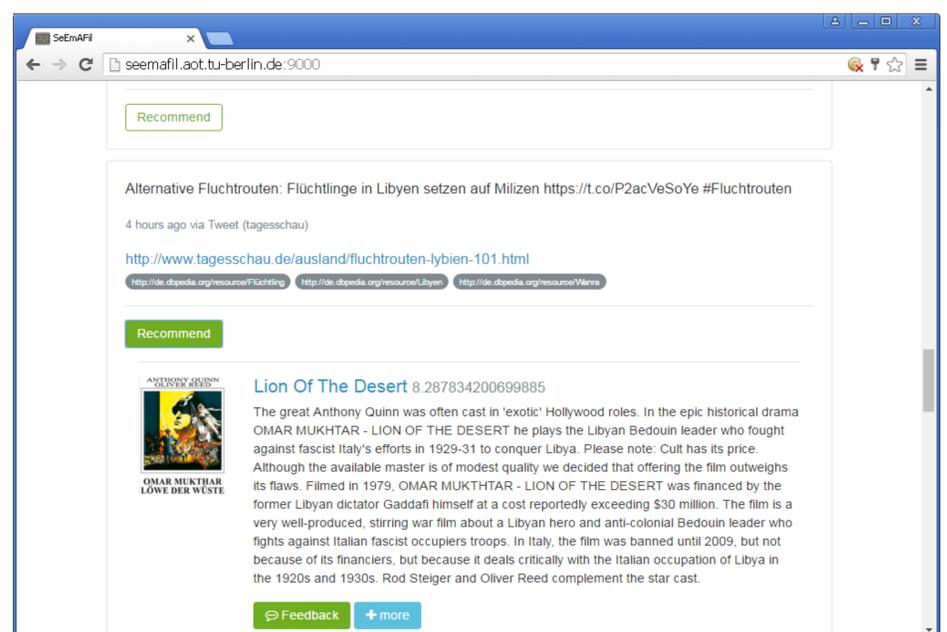
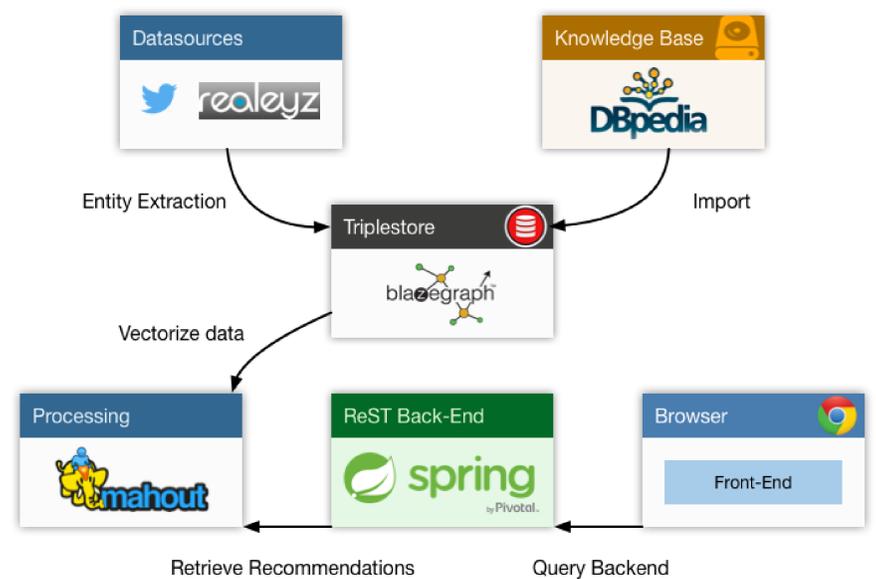
Topic Detection and Film Recommendations

- Topics consisting of entities are detected using various approaches like co-occurrence clustering, LSA, LDA
- Categories for each entity are retrieved transitively with a SPARQL query
- Topics and movies are matched together with the information from the RDF graph

```
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX dcterm: <http://purl.org/dc/terms/>
PREFIX skos: <http://www.w3.org/2004/02/skos/core#>
PREFIX dbpedia: <http://dbpedia.org/resource/>
PREFIX rlz: <https://www.realeyz.tv/>
```



How it Works – System Architecture



Conclusion

- Recommendations based on current trends computed with news in a specific domain.
- Integration of RSS and Twitter as news source.
- Open for the integration of additional, domain-specific news sources / crawlers.
- Dynamic clustering for detecting trending topics.
- Privacy preserving recommendations, no knowledge of user behaviour or explicit profiles required.
- Explanation for the computed recommendations.
- The relevance of films is computed based on current trending / engaging topics relevant for the target group.

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