APOPSIS: A Web-based Platform for the Analysis of Structured Dialogues

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Motivation

We introduce a web-based debating platform that aims to motivate users to participate in well-structured dialogues by raising issues and posting ideas, related to goal-oriented topics of discussion. The primary goal of the system is to offer automated opinion analysis features that help identify useful patterns of relations amongst participants and their expressed opinions.

Method

Algorithms	Description
Mace-Ontology	A semantic representation for organizing the user-generated arguments and their relations
S-mDiCE framework	A multi-dimensional framework for evaluating the strength value of each argument individually
ML algorithms	A collection of Machine Learning algorithms for the clustering of features and the extraction of association rules

APOPSIS can be used by various groups such as individuals, small groups, and a whole community who can work together in thinking and expressing their opinions through complex debates.

Social Community

Creating new ideas

Participants can raise new ideas with the goal of defending their opinions by providing well-justified opinions.

A moderator can ensure the quality of debates by proceeding the strongest opinions to the next level of discussion.

Ensuring the quality of comments

Automated Opinion Analysis

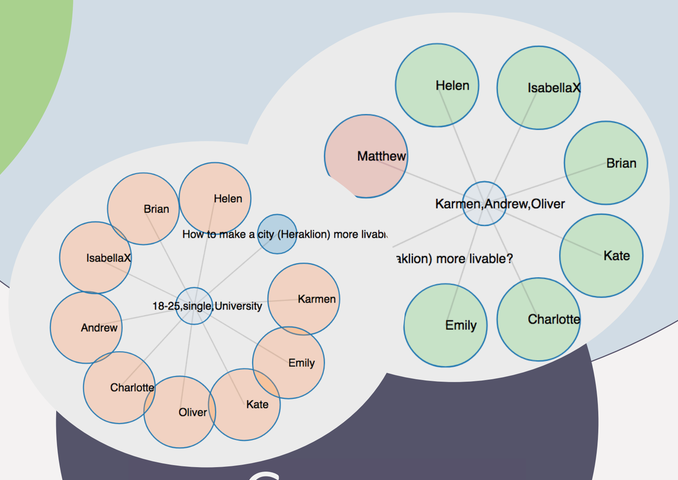
The system offers a graph representation of the dialogue and the different clusters.

Nodes represents groups of users or individuals who share similar or dissimilar views with other groups.

Visualization

The system provides an automated opinion analysis for analyzing the user behavior in social communities.

This analysis aims at identifying and discovering useful patterns among participants and users' opinions expressed through the dialogue.



Group segmentation

Evaluation

A formal framework (s-mDiCE) is used for evaluating the strength value of each argument, based on different metrics.

This algorithm provides a reliable approach for the score calculation of both comments and votes.

Future Work

i. Evaluating the system with real users and large datasets of discussions.
ii. Improving the user interface so that can be more usable and intuitive.

Web Link : ***http://www.ics.forth.gr/isl/apopsis***

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References

i. T.Patkos, G.Flouris, and A.Bikakis. "Symmetric Multi-Aspect Evaluation of Comments." ECAI 2016-22nd European Conference on AI, (2016).

Researchers' Night 2018