Project:
Visualizing MAX IV User feedback and sentiments

About MAX IV

MAX IV is a national large-scale research laboratory providing scientists from Sweden and the rest of the world with instruments for research in areas such as materials science, structural biology, chemistry and nanotechnology. Fully developed it will receive more than 2 000 scientists annually. There are 200 people currently employed at the MAX IV Laboratory. MAX IX, inaugurated June 2016, is the largest and most ambitious Swedish investment in national research infrastructure and the brightest source of X-rays worldwide. MAX IV is hosted by Lund University: united to contribute to understand, explain and improve our world and the human condition.

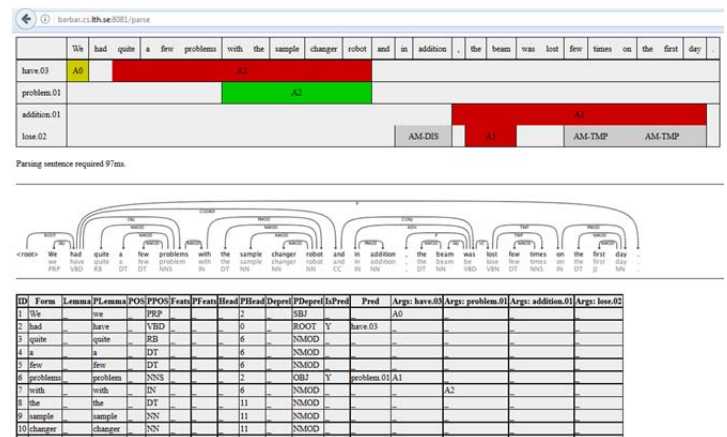Preparations for some experiment at MAX IV.

About this project

MAX IV aims to provide efficient user support to ensure high quality scientific output. One of the many essential aspects is to collect and act on the feedback provided by the users after their experimental sessions. This will contribute to optimize their research outcome as well as the user experience.

The analysis of user feedback, within this project, will be based on natural language processing techniques to categorize text, detect topics, and analyse sentiment. The student will determine the most relevant algorithms for these domains, experiment and evaluate them, and possibly adapt them. The development of the application will build on an existing corpus that the student will use to create machine learning models used by the algorithms.
The student will determine the tools necessary to carry out the project in machine learning, for instance scikit-learn, keras, and in natural language processing, langforia, corenlp, etc.
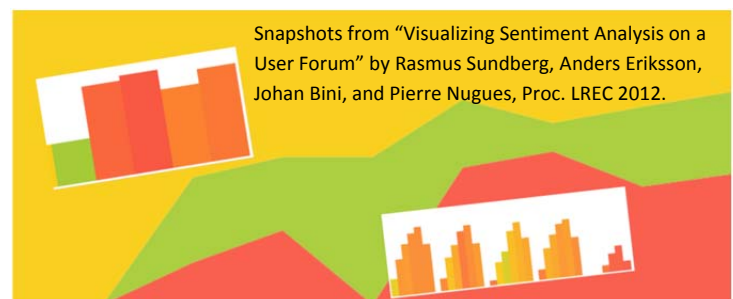

Output of a semantic parser. http://barbar.cs.lth.se:8081/parse

Snapshots from "Visualizing Sentiment Analysis on a User Forum" by Rasmus Sundberg, Anders Eriksson, Johan Bini, and Pierre Nugues, Proc. LREC 2012.

Highlight useful information from the users feedback: trends, statistics, opinions or sentiments.

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- Project duration: 20 weeks (30 credits)