

Using Natural Language Processing to Support Interview Analysis

Summary

High-quality qualitative work is difficult and can be replicated by another researcher with access to the same data within the maximum level of inter-human agreement. Concept extraction involves identifying key topics within text and sentiment analysis may be used to identify the valence of terms associated with the concepts. Here, a nlp tool is used on interview data to explore if concept extraction and sentiment analysis can be used to validate or support coding by researchers.

Work Results

- Literature review
 - Sentiment analysis
 - Agreement levels in data coding: human/human and human/machine
 - Qualitative data analysis, in particular interview analysis, especially formal/automated methods of demonstrating the validity of the results
- Preparation
 - Evaluate existing Open Source sentiment analysis tools and/or libraries
 - Identify sources of data for training domain knowledge and document the process
- Research results
 - A nlp tool capable of training on a corpus of public or private data and identifying key concepts from interviews and abstracting them
 - A theory on the validity of the approach of applying nlp to confirm human qualitative analysis

Advisor

Ann Barcomb, ann.barcomb@fau.de

Prof. Dr. Dirk Riehle, dirk.riehle@fau.de

Open Source Research Group
Computer Science Department
Friedrich-Alexander University

Link to thesis descriptions: <http://osr.cs.fau.de/fun>

Link to layout of final theses: <http://wp.me/pDU66-S1>

Link to grading framework for final theses: <http://wp.me/pDU66-MF> .